Rocky Mountain Medical Journal

Directory Number

Scientific and News Section

February 1955

Vol. 52—No. 2
In Two Parts—Part I
35c Per Copy
$3.50 Per Year

RELATIONSHIP OF CIGARETTE SMOKING TO LUNG CANCER
A NEW APPROACH TO MULTIPLE SCLEROSIS—BACTEREMIA IN ANORECTAL INFECTIONS—HEMIPELVECTOMY AND CYSTECTOMY FOR METASTATIC CARCINOMA OF THE PELVIS—RADIOACTIVE IODINE IN TREATMENT OF PULMONARY EMPHYSEMA
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References

(1) Kirby, W. M. M.; Waddington, W. S., & Doornink, G. M.: Antibiotics Annual, 1953-1954, New York, Medical Encyclopedia, Inc., 1953, p. 285.
(2) Finland, M., & Haight, T. H.: *Arch. Int. Med.* **91**:143, 1953.

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VOLUME 52 NUMBER 2
FEBRUARY, 1955

ROCKY MOUNTAIN MEDICAL JOURNAL

Title Registered, U. S. Patent Office

Publication Office:
835 Republic Building (1612 Tremont Place), Denver 2, Colorado
Telephone AComa 2-0547

Ownership and Sponsorship: The Rocky Mountain Medical Journal is owned by the Colorado State Medical Society and is published monthly as a non-profit enterprise for the mutual benefit of the organizations which jointly sponsor it. It is published under the direction of the Board of Trustees of the Colorado State Medical Society, assisted by an Editorial Board representing the sponsoring organizations. It is the Official Journal of the Colorado State Medical Society, the Montana Medical Association, the New Mexico Medical Society, the Utah State Medical Association, the Wyoming State Medical Society, the Rocky Mountain Medical Conference, and the Colorado Hospital Association.

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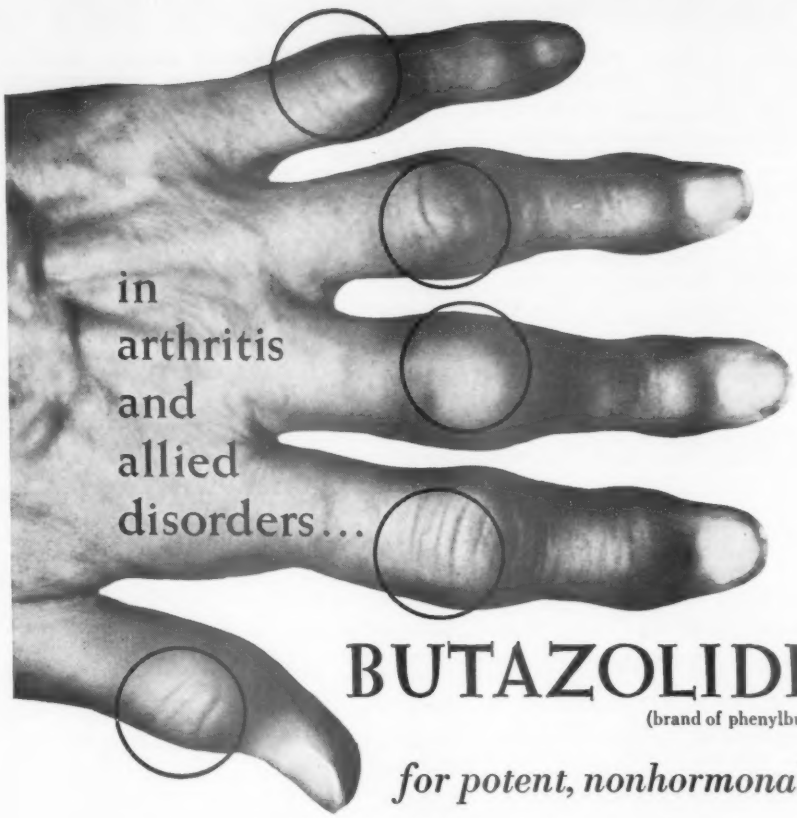
Advertising: National representatives: The State Journal Advertising Bureau, 535 North Dearborn Street, Chicago 10, Ill. Local advertising from firms in the Rocky Mountain area should be submitted to the Associate Editor of the appropriate state or to the Journal office. Advertising forms close on the 15th of the month preceding publication; allow ten days additional to insure submitting proofs for approval.

Subscription: $3.50 per year in advance, postpaid in the United States and its possessions; single copy 35c plus postage. Subscription is included in medical society dues of sponsoring state medical organizations.

Second Class Matter: Entered as second class matter Jan. 22, 1906, at the Post Office at Denver, Colo., under the Act of Congress of March 3, 1879. Accepted for mailing at special rates of postage provided for in Section 1103, Act of Oct. 3, 1917; authorized July 17, 1918.



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1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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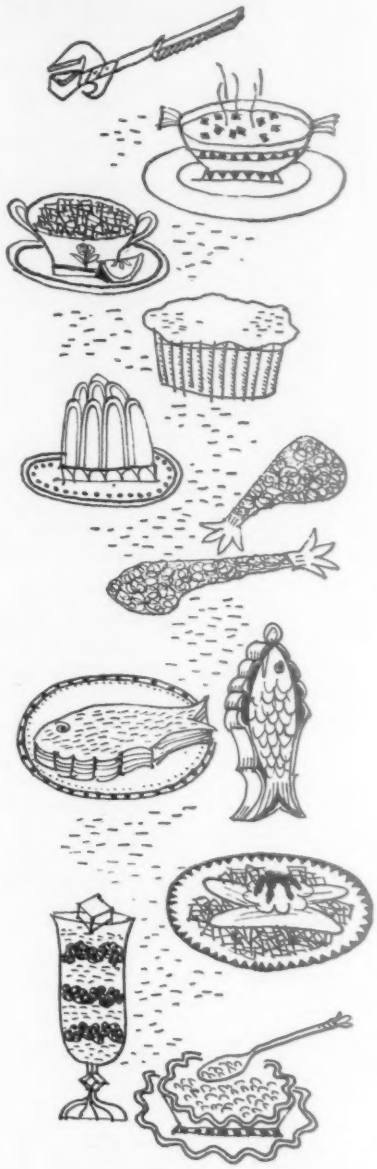

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Rice cooked in pineapple juice, water, and sugar makes a golden dessert. And for a gay parfait—alternate layers of farina pudding with puréed plums. Then put a sparkling cube of clear jelly on top.

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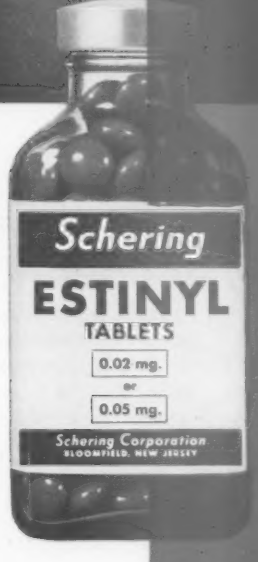

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Rocky Mountain Medical Journal

FEBRUARY, 1955

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The Mark Of a Man

DR. ELMER HESS, President-Elect of the American Medical Association, has long been identified as a leader in affairs of organized medicine at the national level. We have great faith in his impending administration, and our confidence has been bolstered recently by his statements at the 48th annual meeting of the Southern Medical Association and before the Public Relations Conference at the A.M.A. clinical meeting at Miami.

Dr. Hess gave a significant quotation, since printed in the J.A.M.A. and worth repeating here:

"The amenities of professional intercourse, and the obligations of medical men toward each other and the public, were perhaps better observed in 1850 than now. Then the doctor, next to the minister, was the trusted friend and counselor of every family to whom he ministered. He shared their joys, soothed their sorrows, and every passing year added to and cemented the attachment of affection between them. Now the doctor is regarded more in the light of a tradesman or mechanic and is employed from the same consideration that a grocer, tailor, or shoemaker is. The strong ties of gratitude and affection have almost ceased to exist. Relationship is now placed upon a mere commercial basis, and for this the profession is more to blame than the public."

This statement was made by an Illinois colleague in 1882—yet some of us have come to believe that our many problems are of contemporary origin. We have been equally mistaken in believing that good public relations will follow public recognition of our good deeds. Also, some have thought that the answer lies in employment of able public relations counsel and staff. Both perceptions are wrong. People often love their individual physicians, but the attitude toward our profession in general may be one of high regard—though anything but warm.

Members of the medical profession have participated and responded generously to lay groups, radio, television, and press requests for factual information regarding life and health. But have we concerned ourselves so much with fathoming people's minds—and telling each other of our accomplishments—that we have failed to search ourselves for our own shortcomings?

For example, many physicians have offered or encouraged frank discussion of fees. However, busy as we are, this responsibility has been too often delegated to third parties in our offices. Patients are reluctant thus to confide their ability or inability to pay. We owe every patient our personal concern with each element of his problem, for they are all important to him. He deserves our discretion also in type and quantity of medicines and other treatments. "Treat your patient's pocketbook the same as you would your own." As upright men instructed in the art of healing, we must care for the sick regardless of financial implications—for this is just as much a part of our ethics as the honorable dealing with our colleagues. Fellow workers—executive and personal secretaries, public relations personnel, technicians, lawyers, librarians and clerks among the rest—are essential, of course. But with our guidance, observation, and coaching they must always remember that people are human beings—not just cases.

Our national President-Elect suggests that we should not try to find out what is wrong with the people. Rather let each of us "give a little" and ask the question, "What's wrong with the way I am doing things?" Laymen are busy, too, their time is valuable, and they are little concerned with the problems of a great profession which to them is amply rewarded financially as well as spiritually.

Ideals of Dr. Hess are furthermore shown in his statement that a doctor "who lacks faith in the Supreme Being" has no right to practice his profession. Faith does much which material tools do not, and the physician who walks into a sick room is not alone. Spiritual values have been neglected in concentration on basic science. Medical men who enter the profession and practice with the objective of financial gain discredit their colleagues. State and county medical societies must make a major project of special attention to the problems of those who are unable to pay for their own medical care or to buy appropriate insurance. When our primary interest is clearly the individual problems of our patients, health and financial together—and we abide by the Golden Rule—then the American way of free enterprise will be perpetuated.

Veterans' Medical Care

THE American Legion when Arthur J. Connell was its national commander and spokesman, began attacking the American Medical Association for standing pat on its contention that the government should pay a veterans' doctor and hospital bill only for treatment of disabilities and diseases that result from military services, except in cases of tuberculosis or mental illness which the nonveteran population may normally get at public expense. It is difficult for any of us to understand why the government owes any veteran, and especially his dependents, medical care for the rest of his life because he answered his country's call at the time of need. Upon what basis can the veteran claim non-service-connected benefits, and why are 85 per cent of patients admitted to veterans' hospitals for some condition unrelated to military service? Since there are now twenty million veterans, and every able-bodied boy 18½ years old or through college will serve in our armed forces, nearly one-half of the adult males today are, or will be, veterans. In another generation, the only males who are not veterans will be physically substandard, conscientious objectors, or the mentally deficient.

At the A.M.A. Annual Session in San Francisco, our House adopted recommendations by the Reference Committee on Insurance and Medical Service which re-affirmed the policy on non-service-connected disabilities established at the 1953 meeting. The House also adopted two strong resolutions by the Reference Committee on Legislation and Public Relations condemning the present practice of establishing service-connection for veterans' disabilities by legislative fiat. The committee said:

"The study of chronological expansion by law and regulation, together with evidence presented of pending legislation now before a Congressional Committee, emphasize all too clearly the imperative need of decisive action on the part of the American Medical Association.

"It is the opinion of the committee that the time is at hand when the American Medical Association and its component societies should go all out in preventing this unscientific method of determination of service-connected disabilities, and that we respectfully request that copies of these resolutions be transmitted to the Congress of the United States and other appropriate federal agencies."

There is apparently a great inconsistency in the American Legion. It is one of the country's strongest bulwarks against forces that would make the state master of the citizen. And yet it would make one-half the male population of America eligible for all medical care at government expense, thereby fostering the greatest known entering wedge for socialization of a country's economy.

Relationship of Cigarette Smoking to Lung Cancer*

ALTON OCHSNER, M.D.
New Orleans, Louisiana

AS THE result of tremendous advances made in medical science, death rates generally have decreased throughout the United States and the world. Life expectancy is longer now than ever before. There are two exceptions to this general rule. These two are cancer of the lung and coronary heart disease. In white males in the United States, the death rate from cancer of the lung increased from 5.3 per 100,000 population in 1930 to 27.1 per 100,000 in 1948, an increase of 411 per cent (Fig. 1). In a similar group of individuals, the death rate from coronary heart disease in the United States increased from 61.1 per 100,000 population in 1930 to 235.6 per 100,000 population in 1948, an increase of 286 per cent.[1] In females in the United States, the death rate from lung cancer has increased from 0.6 per 100,000 population in 1914 to 4.3 per 100,000 population in 1950 when standardization for age is made. The similar figures for males are 0.7 per 100,000 population in 1914 and 19.6 per 100,000 population in 1950.

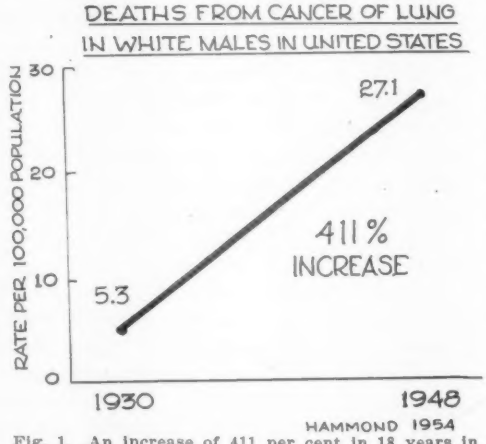


Fig. 1. An increase of 411 per cent in 18 years in deaths from lung cancer.

In the United States, cancer of the lung was relatively rare prior to thirty years ago. In 1920, it represented 1.1 per cent of all cancers; in 1930, 2.2 per cent of all cancers; in 1948, 8.3 per cent of all cancers. We have had the temerity to predict that in 1970, unless something is done to prevent the tremendous increase in the incidence of lung cancer, it will represent approximately 18 per cent of all cancers or approximately one in every five. This prediction is based upon the incidence of lung cancer in both sexes, and since cancer of the lung is primarily a disease of males, one can predict that in 1970 one out of every two or three cancers in men will be a cancer of the lung. The American Cancer Society has reliable statistics to support the contention that one out of every five persons living will develop a cancer, which will mean that in 1970, unless something is done to prevent the increase in the incidence of lung cancer, approximately one out of every ten or fifteen men living in the United States will develop a cancer of the lung. These figures are staggering and emphasize the magnitude of the problem of bronchogenic cancer.

The increase in incidence of bronchogenic cancer is not limited to the United States but is seen throughout the civilized world. In Holland, for instance, from 1924 to 1951, there was a twenty-fourfold increase in the incidence of lung cancer deaths in men and a tenfold increase in women during this same period of time. In 1931, cancer of the lung represented 0.5 per cent of all the deaths in England and Wales in males, whereas in 1952, this percentage had in-

*Presented before the annual session of the Colorado State Medical Society at Colorado Springs, September 21-24, 1954. From the Department of Surgery, Tulane University School of Medicine, and the Ochsner Clinic.

creased to 5 per cent. In 1931, cancer of the lung represented 5 per cent of all cancer deaths and in 1952, this percentage had increased to 26. In England during the year 1950, 4 per cent of all the male deaths were due to cancer of the lung and between the ages of 45 and 54, 10 per cent of the deaths in males were due to this disease.[2]

As stated previously, deaths from all causes except cancer of the lung and coronary heart diseases have been decreasing. It is a well known fact, however, that with each advancing year past 40 years of age there is an increasing incidence of cancer with increasing age. Cancer is primarily a disease of older persons. This is true of all cancers except cancer of the lung, which does not correspond to the pattern of a progressive increase in the incidence of the disease with each advancing year of life. At the present time, cancer of the lung increases very rapidly, much more rapidly than other cancers, to reach a peak incidence at approximately 55 years, following which there is a decrease in its incidence. This deviation from the pattern followed by all other cancers is seen not only at the present time but has been present for at least the past ten years, the only difference being that ten years ago the peak incidence was not as high as it is at the present time and occurred at a later date. Whereas, ten years ago, the peak incidence occurred at approximately 65 years, and five years ago at approximately 60 years, at the present time the peak incidence is 55 years.

In a survey by the American Cancer Society[3] it was found that among white males between the ages of 50 and 55 who were interviewed, 15 per cent had never smoked whereas 43 per cent had been heavy cigarette smokers, in contrast to a group of men between the ages of 65 and 70, in which 20.3 per cent smoked cigarettes heavily and 21.6 per cent had never smoked (Fig. 2). It is thus seen that heavy smoking is much more common in younger men today and the incidence of non-smoking much less than it is in older men. This is because youngsters who previously began smoking after 21 now begin smoking in the first decade of life.

The lack of conformity of lung cancer to the pattern followed by all other cancers we believe is due to the fact that there is a causal relationship between smoking and lung cancer and also between smoking and coronary heart disease. The increasing incidence occurring at an earlier age in the more recent period of time is due to the fact that men who are now 55 began smoking approximately ten years earlier than men who were 55 ten years ago. They have subjected their bronchi and cardiovascular systems to the deleterious effects of tobacco, and if they develop cancer they develop it at an earlier age than that at which is previously occurred. The reason for the decrease in the incidence of bronchogenic cancer after the peak is obtained is that individuals who are heavy smokers have subjected their hearts and blood vessels to the deleterious effects of tobacco and many develop coronary heart disease, succumb to it, and do not live long enough to develop bronchogenic cancer. One might facetiously state that a dubious advantage of cigarette smoking is that one might be spared a lung cancer death because of the possibility of developing coronary thrombosis and dying from it before lung cancer has a chance to develop.

According to the Public Health statistics, there was a decrease in the incidence of cancer deaths in females from 1933 to 1948 but a progressive increase in the incidence of cancer in all sites in men. If one considers all cancers exclusive of bronchogenic cancer, one sees that there is a slight increase, but very much less than when bronchogenic cancers are included, which indicates that the principal increase in the incidence of cancer deaths in men is due to the tremendous increase in the incidence of cancer of the lung.

Although there are many who will readily admit that cancer of the lung is a common disease today, particularly in men, they are of the opinion that it is not increasing but that previously it was misdiagnosed and that the increase in the incidence is not real but only apparent. There are two reasons why we are of the opinion that this contention is not true. One is that in those countries, such as the Germanic countries,

where autopsies are done routinely and have been done for the past hundred years, the incidence of bronchogenic cancer has increased throughout the years. Even by the greatest stretch of imagination, one cannot envision a well-trained German pathologist overlooking a bronchogenic cancer at autopsy twenty or thirty years ago. Another reason is that if incorrect diagnoses were made previously, there should be a decrease in the conditions which were erroneously diagnosed as bronchogenic cancer. If one considers the older age group in which bronchogenic cancer is frequent, it is evident that there was no decrease in the incidence of pulmonary tuberculosis between the years 1933 to 1948, during which time there was a tremendous increase in the incidence of bronchogenic cancer.

As mentioned previously, it is our conviction that there is a definite causal relationship between cigarette smoking and lung cancer and that the cancer is due to a carcinogen in cigarette smoke. That carcinogens are present in the smoke from cigarettes has been shown by Graham and Wynder.[4] These investigators obtained cigarette smoke by smoking cigarettes in a robot machine in a comparable manner to the way humans smoke cigarettes. Every sixty seconds a drag of two seconds was taken. The smoke so obtained was cooled and the tarred residue was applied to the skin surface of animals three times a week. At the end of eight months, one noncancerous or benign tumor developed at the site of the application. At the end of one year, one true cancer developed. Had the investigation been terminated at that point, the results would have been necessarily negative. However, Graham and Wynder persisted and continued to apply the tarred residue obtained from cigarette smoke to the animals because they realized that a definite period of time is necessary for a carcinogen to be applied before a cancer develops. At the end of two years, 44 per cent of the animals developed a true cancer which was indistinguishable from human cancer, histologically and biologically. It metastasized, killed the animal, and in many instances was transplantable. The criticism has been raised that one cannot compare human and animal cancer. In citing the investigative work of Graham and Wynder, no attempt is made to compare human and animal cancer. This simply demonstrates that contained within the smoke from cigarettes is a factor which contains carcinogens which will produce a cancer.

The criticism is frequently raised that there can be no causal relationship between the incidence of smoking and cancer of the lung because precancerous conditions are not found in the bronchi, which should be the case were the lung cancer the result of the carcinogenic effect of tobacco. Unfortunately, in performing autopsies, very little attention is paid to the microscopic changes in the bronchial mucosa, and it is because of this that the early changes are not known. Relatively recently a senior medical student[5] at Tulane University examined the bronchi of patients coming to autopsy. He found that there was considerable difference in the histologic picture of individuals who had never smoked, those who had smoked moderately and those who had smoked heavily. As a matter of fact, the individual who had smoked cigarettes heavily had definite metaplastic changes in the bronchial mucosa which could easily be termed precancerous lesions.

The objection that is also frequently raised to a causal relationship between cigarette smoking and cancer of the lung is that if such a relationship did exist, there should be a proportionate increase in deaths from laryngeal cancer, which is not the case. Although the death rate from laryngeal cancer is not increasing proportionately, as is the death rate from lung cancer, the incidence of laryngeal cancer *is* increasing in proportion to the incidence of lung cancer. The difference between laryngeal cancer and lung cancer is that laryngeal cancer is readily diagnosed because the patient, fortunately, consults a physician early; it is a relatively slow growing lesion; and it is as amenable to curative therapy as any cancer in the body. The reason why the death rate from laryngeal cancer is not increasing is that patients with laryngeal cancer are cured and a relatively small proportion die. One might similarly state that the incidence of appendicitis is

extremely low if one based it upon death statistics. Although fifty years ago the incidence of appendicitis based upon autopsy statistics was extremely high, at the present time the death rate is extremely low, for the simple reason that patients with appendicitis are operated upon and do not die.

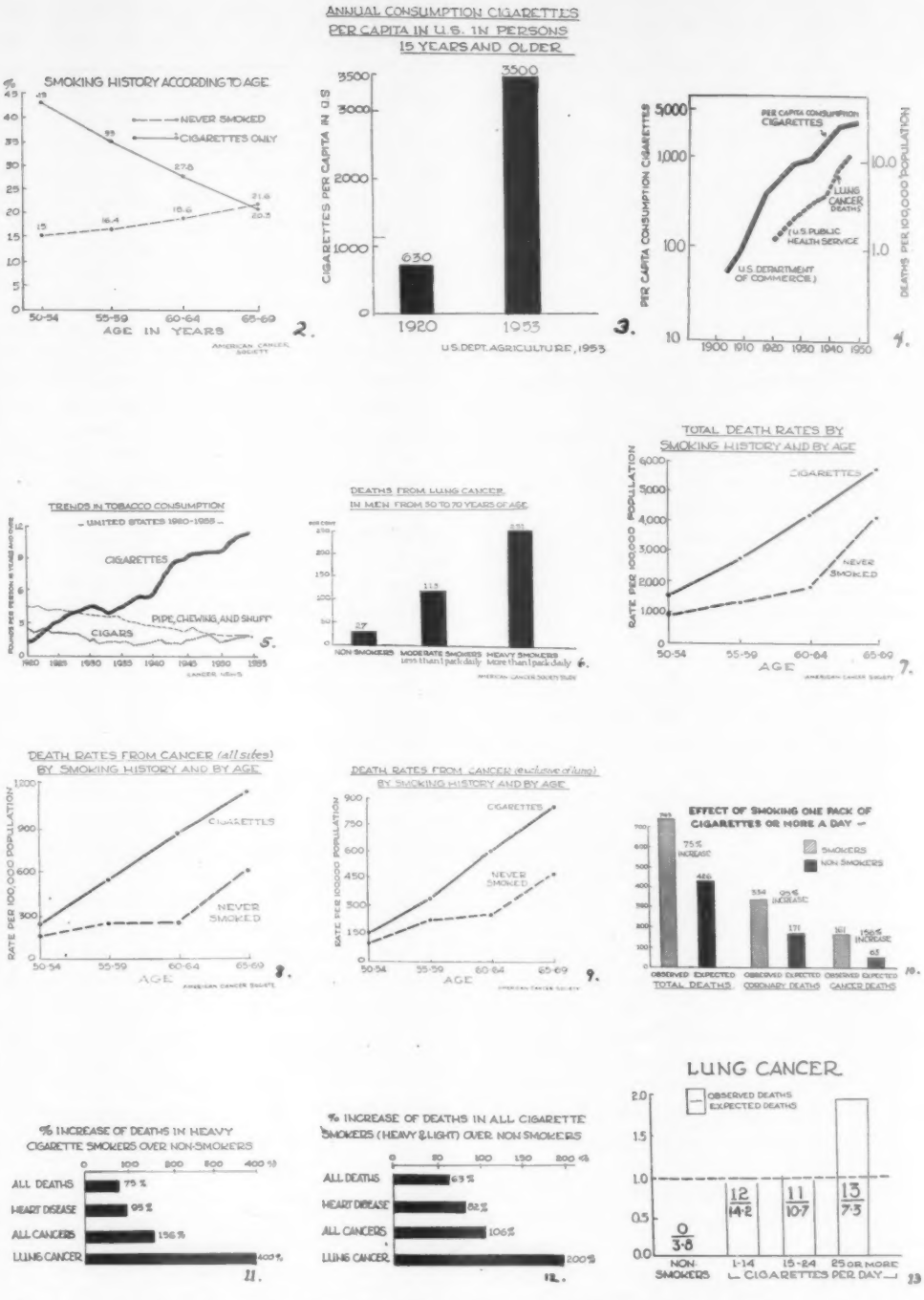
In addition to the fact that smoke from cigarettes contains a carcinogen which can produce cancer in animals, there is a distinct parallelism between the sale of cigarettes and the incidence of cancer of the lung. The annual consumption of cigarettes per capita in the United States in persons 15 years of age and older increased from 630 in 1920 to 3,500 in 1953, an increase of 456 per cent in thirty-three years. During the same time the amount of tobacco in cigars decreased about a half of its value in 1920[6] (Figs. 3-5).

There is tremendous impetus at the present time to the use of measures to cut down the deleterious effects of tobacco. There are few companies which do not advertise that its particular brand is less harmful, less poisonous, and less injurious than that of its competitors. In essence, the advertising, which is the most negativistic type that could be used, is simply, "Our product will kill you, but it won't kill you quite as fast as will our competitor's." The measures which are used to cut down the deleterious effects of tobacco are king-sized cigarettes, presumably the butt end of the cigarette acting as a filter, and the use of various filters. It has been shown that these measures, whether it is a long cigarette or the filters which are now used, exert little effect on the absorption of tars and nicotine. Tar is the factor which contains the carcinogen, nicotine the factor which is deleterious to the heart and blood vessels. Therefore, one can get little comfort in the use of filters or king-sized cigarettes except a possible psychic effect.

For many years those of us who have been convinced that there was a causal relationship between cigarette smoking and cancer of the lung have had considerable difficulty in convincing others, many of whom were physicians, because the statement has been frequently made, "The fact that over 97 per cent of patients with cancer of the lung are heavy smokers, as contrasted with approximately 85 per cent of the general population as a whole, means nothing. Until one knows what the incidence of cancer of the lung is among smokers as contrasted with non-smokers, one cannot say with any certainty that there is a causal relationship." It was difficult to understand why individuals, particularly physicians, were reluctant to accept the probable causal relationship, because the profession and industry have been perfectly willing to accept a causal relationship between the incidence of cancer of the lung and certain industrial hazards such as chromium and uranium.

It remained, however, for the American Cancer Society to prove finally, without any question or doubt, that there is a causal relationship between smoking and lung cancer. Approximately three years ago, a survey was undertaken by the American Cancer Society.[3] Twenty-two thousand volunteer workers in the states of New Jersey, Pennsylvania, New York, southeastern Michigan, Illinois, Wisconsin, Minnesota, Iowa, and California interviewed 204,547 white men between the ages of 50 and 70. Deducting those cases which could not be used, there were 190,134 which were usable. Of these, 98.8 per cent were successfully followed. At the end of a year, the same volunteer workers interviewed each man again. At the original interview and at subsequent interviews his smoking history was obtained, whether he smoked at all, what he smoked, if he smoked, and how much he smoked. At the end of two years, a total of 4,854, or 2.6 per cent of the entire group, had died.

It was found that the death rate among cigarette smokers was 65 per cent higher in the age group 50 to 54 than in the group in which there was no smoking. The death rate from all causes among those who smoked a pack or more cigarettes a day was 102 per cent higher than that in the group in which none had smoked from the ages 50 to 54. It was also found that the death rate in those who smoked moderately, up to half a pack of cigarettes a day, was higher than in those who never smoked, and that the rate in those who smoked from half a pack to a pack of cigarettes was



Figs. 2 to 13. Factual data upon relationship of lung cancer to cigarette smoking. Figs. 2, 6, 7, 8, 9, 10, 11, 12, after Hammond, E. C., and Horn, Daniel: The Relationship Between Human Smoking Habits and Death Rates: A Follow-Up Study of 187,776 Men, J.A.M.A., Aug. 7, 1954. Letters from Dr. Hammond and the Journal of the American Medical Association give permission to reproduce these figures.

higher than in those who smoked moderately, from none to half a pack. Hammond[7] showed the death rate from lung cancer in the men between 50 and 70 who had never smoked or smoked occasionally was 27.2, in those who smoked less than a pack of cigarettes a day it was 113.1 and in those who smoked a pack or more a day it was 251 (Fig. 6). The death rate in heavy smokers was nine times as great as in non-smokers or those who smoked occasionally. It is thus seen that there is a relationship between smoking and death rates and that there is, in addition, a relationship between the amount smoked and the number of deaths.

The suggestion has been made that air pollution is a factor and that one of the reasons why the incidence of cancer of the lung is higher in urban areas is because of the air pollution. In the American Cancer Society survey[3] it was shown that in the ages between 50 and 54 the death rates in the urban population of those who never smoked was 12.7 per cent, whereas in those who smoked cigarettes it was 44.9 per cent These percentages in the rural district were 19.4 per cent and 42.4 per cent. It is thus seen that the incidence of heavy smokers in cities is greater than in the rural areas, and the incidence of non-smokers is higher in rural areas than in urban areas. Therefore, the increase in the incidence of cancer of the lung in urban areas can be explained entirely upon the increased carcinogenic effect of cigarette smoke.

We mentioned previously that the two causes of death which are increasing, in contradistinction to other causes of death, are cancer and coronary disease. In the American Cancer Society statistics[3] there was a tremendous difference in the death rates from all cancers between those who smoked cigarettes and those who never smoked. This was true not only of individuals who had cancer of the lung but of those who had cancers aside from the lung (Figs. 7, 8, and 9). This was a surprise to many of us, because although we realized that there was a definite causal relationship between smoking and cancer of the respiratory tract, including the mouth, we were not aware of the fact that there is a relationship between smoking and other cancers aside from the respiratory tract. It was found in the American Cancer survey[3] that in the non-smoking group there were 426 deaths. In the heavy smoking group there should be the similarly expected number, but this was exceeded by 319, making a total of 745. The cancer deaths in the non-smokers was sixty-three as contrasted with 161 in the heavy smoking group (Fig. 10). In other words, the total number of deaths was 75 per cent above the expected number, cancer deaths were 156 per cent above the expected number, and deaths from coronary heart disease were 95 per cent above the expected number. There was a 400 per cent increase in the number of deaths among heavy cigarette smokers as compared with non-smokers from lung cancer. When all smokers were considered, including both the heavy and light, there was a 63 per cent higher death rate among heavy smokers from all causes, an 82 per cent higher death rate from heart disease, a 106 per cent higher death rate from all cancers, and a 200 per cent higher death rate from cancer of the lung (Figs. 11 and 12).

Similar results are reported by Doll and Hill[8] in a study concerning the relationship between smoking and the disease among doctors. They found that there was a considerable difference in deaths from lung cancer according to whether the doctor smoked or did not. In the non-smoking group there was an expected incidence of 3.77 but there were no observed deaths. In the group smoking approximately one to 14 cigarettes a day there were 14.2 expected deaths and 12 observed deaths. In the group that smoked from 15 to 24 cigarettes a day there were 10.7 expected deaths and 11 observed deaths. In the group that smoked 25 or more cigarettes a day there were 7.33 expected deaths and 13 observed deaths (Fig. 13).

As mentioned previously, there are many who are reluctant to accept a causal relationship between smoking and cancer of the lung, although this reluctance is less marked now than before the highly significant investigation by the American Cancer Society.[3] The evidence now is irrefutable

that the incidence of lung cancer, heart disease, and other cancers aside from those affecting the lung, and of deaths in general is higher among cigarette smokers than among non-smokers. The greatest relationship is between smokers and cancer of the lung. The fact, also, that cancer of the lung is increasing more than any other cancer in the body and that there is a distinct parallelism between the consumption of cigarettes in the civilized world and the increase in cancer of the lung, together with the fact that a definite cancer producing agent has been found to exist in the smoke from cigarettes, is proof without any question or doubt that there is a causal relationship between smoking and cancer.

The reason why the medical profession has been reluctant to accept this relationship and why they have not emphasized it more emphatically is that so many of the medical profession smoke, and it is only human nature that one is unlikely to condem something which he does. Those who continue to smoke, and many will in spite of the evidence which has piled up, should take the precaution of getting an x-ray of his or her chest every three to six months, so that, when a cancer of the lung does develop, it can be detected at a time when it is still limited to the lung, at which time most are curable.

It is far better, however, to prevent cancer than cure it. For this reason, it would seem to me that a far better solution of this problem would be to refrain from smoking, since it is a definite cancer producing agent.

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A New Approach to Multiple Sclerosis*

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DUE to obscure etiology and pathologic physiology of multiple sclerosis, therapy has run the gamut of many types of therapy including low-fat diet, vasodilators, anticoagulants, circulatory stimulants, vitamins and drugs which are claimed to alleviate muscle spasticity.

It is estimated that more than 250,000 people in the United States are suffering from multiple sclerosis. Since multiple sclerosis is not a reportable disease, it is difficult to determine accurately the exact number who have this chronic disease and what is the mortality rate. In most cases, it is a disease of young adults between the ages of 20 and 45 and the psychologic factors are great. Multiple sclerosis is also known in children under 11 years of age. An early diagnosis of multiple sclerosis is difficult and as a consequence many cases are missed. Present knowledge has taught us that multiple sclerosis is a chronic disease of the central nervous system. In many areas in the brain and spinal cord, throughout the central nervous system, myelin is altered or destroyed. It is not known how this destruction takes place, but it is believed that it causes either complete stoppage of nerve impulses—thus producing paralysis of the parts of the body innervated by these nerves—or the impulses pass through the affected nerves so changed that those parts

*A list of twenty-one references will appear on the author's reprints, available upon request.

of the body innervated by such nerves perform their functions in a disturbed fashion. The signs and symptoms commonly observed are diplopia, ataxia and vertigo, paresthesias, tremor, nystagmus, extreme asthenia, speech difficulties, emotional disturbances and urinary and fecal incontinence.

Research in treatment of multiple sclerosis includes biophysics and biochemistry of the myelin sheath, the mechanism of remissions, clinical use of hormonal agents, virus etiology, allergic factors, circulation of brain and spinal cord, nutrition, psychologic studies, ATP, spirochetal infection and succinate therapy. Current therapy in multiple sclerosis shows the error of evaluating empirical therapy in this disease, which is characterized not only by spontaneous remissions, but also by a state of mind or euphoria, which makes a patient with multiple sclerosis responsive to phychotherapeutic suggestion. S. A. Kinnier Wilson stated, "Causal ignorance entails an unfortunate diffusion of therapeutic endeavor, and spontaneous remissions make it difficult to assess the value of any particular treatment. The pharmacopeia has been ransacked for 'nerve tonics' which flatter only to deceive." Aird stated that those methods which presumably have served to improve vascular supply have been observed by many to be of some benefit in multiple sclerosis. The evidence, however, does not permit deductions as to whether the benefit is the result of improved tissue oxygenation or an improved vascular supply in other respects. This author adds that a relationship may exist between the beneficial effects of vasodilators and sodium succinate in multiple sclerosis. Vasodilation is presumed to improve the vascular supply and nutrition of the tissue involved, one of the important aspects of which is tissue oxygenation.

Brickner recommended the use of vasodilation to alleviate new or fresh phenomena in multiple sclerosis. He emphasized that the vasodilation must not be used according to any fixed routine and that the dosage, frequency of administration, and type of vasodilator varies with each patient and at different stages in each patient's course. This worker employed amyl nitrite, histamine phosphate, carbon dioxide and nicotinic acid.

This report deals with Hydergine*, a new vasodilator which is well tolerated, can be taken for long periods, and is virtually without toxicity. Each tablet of Hydergine contains 0.5 mg. of three hydrogenated ergot alkaloids, dihydroergocornine, dihydroergocristine and dihydroergokryptine and each c.c. contains 0.3 mg. of these alkaloids. As a result of hydrogenation, the vasoconstrictor properties have been eliminated and the blocking of the sympathetic is predominant. Rothlin and Rothlin and Cerletti demonstrated that Hydergine produces peripheral vasodilatation in animals by means of the effect on the centre regulating vessel tonus and a peripheral sympatho-adrenergic blocking activity. Rothlin and Bircher stated that in addition to the central sedative effect on autonomic functions, Hydergine also exerts a central sedative action which affects psychic and somatic functions. Barcroft, Konzett and Swan reported that in man, Hydergine produces peripheral dilatation without decrease in blood pressure in normotensives and a decrease in blood pressure in hypertension. Goetz and Katz and Kappert showed that Hydergine has a central action through the vasomotor center. Popkin reported improvement with Hydergine in the treatment of many complaints of the geriatric patient such as dizziness, headache, weakness, fatigue, stiffness of the extremities, intermittent claudication, etc. The results, according to this author, are attributed to increased cerebral circulation, increased pulmonary ventilation, peripheral vasodilation and increased cardiac efficiency. Winsor reported favorable results with Hydergine on the headaches of essential and arteriosclerotic hypertension. This author also reported favorable results in some cases of headache associated with the Menière's syndrome, also in the geriatric patient who has restlessness, irritability and confusion as well as headache. Anderson and Rubin demonstrated that Hydergine

*Furnished by Sandoz Pharmaceuticals, San Francisco, California.

was effective in vertigo, hypertensive epistaxis and Bell's palsy. Schober treated six cases of cerebral thromboendangiitis with Hydergine; in two cases the vascular changes were directly observed on the ocular fundi. Hydergine restored the normal vascular tone. The therapeutic results were good in all six cases. Schober in a subsequent paper cited twelve cases of cerebral vascular disturbances (thromboangiitis, arteriosclerosis and diabetic angiopathy) all of which have benefited by Hydergine treatment. Strauss mentioned favorable results obtained by Hydergine in cerebral vascular disturbances. In a subsequent publication (Strauss) twenty-three cases are reported on, twenty-one of which benefited by Hydergine treatment. Majer treated one case of Buerger's disease with cerebral localization with good results—0.5 c.c.—1c.c. Hydergine was injected intramuscularly twice a week and then oral therapy was instituted. Lasch published the case history of a hypertensive patient, whose cerebral symptoms quickly disappeared under Hydergine treatment. Four days before admission, speech difficulties and paralysis of the right arm were observed. One c.c. Hydergine intramuscularly and the oral form of the drug were given daily during five days. Thereafter, oral treatment only was practiced. A new blood pressure crisis with recurring neurological symptoms was overcome within twenty-four hours by administration twice of 1 c.c. Hydergine. Six weeks later, no neurologic defects were observed. Gross, Leuterer and Matthiessen treated recent or inveterated cases of apoplexy with Hydergine given parenterally; this treatment was supplemented by infiltrations of the stellate ganglion (once to twice weekly infiltration of the stellate ganglion and 1 c.c. Hydergine intravenously daily; in certain cases also oral therapy was given). The results obtained were satisfactory.

My interest in Hydergine for the treatment of multiple sclerosis was stimulated by a paper by Hirschmann, Bente and Schmid who reported their results with Hydergine in twenty-five cases of multiple sclerosis. Patients were unselected and no other therapy but Hydergine was employed. Oral and parenteral Hydergine therapy was employed intermittently. Patients were treated for fourteen days, with a pause of five to seven days and then therapy resumed. Best results were obtained in acute cases.

CASE HISTORIES

1. White female, aged 40. This patient in May, 1951, complained of toxic vertigo secondary to an abscessed tooth. The vertigo cleared upon removal of the infection and the true nature of the condition was not diagnosed until October, 1951, when she developed weakness of the right lower extremity, positive Babinski, right, and speech defect. Studies by a competent neurologist confirmed the diagnosis of multiple sclerosis. Available methods of treatment were instituted without noticeable improvement. The patient was placed on a regimen of Hydergine sublingual tablets in doses of one tablet three times daily the first week and two tablets three times daily the second week and three tablets three times daily the third week. Ataxia has improved and the patient experiences a feeling of well-being. When Hydergine therapy is withdrawn, symptoms recur.

2. White male, aged 41. Symptoms nine years' duration. Diagnosis, multiple sclerosis five years. Usual treatments tried, but disease slowly progressive. Wore metal toe plates which had to be replaced at intervals of two weeks because of wear from dragging feet. Eight months have elapsed since treatment was started and shoe plates have not been replaced for four months. He states that his ataxia is less and that he can walk for greater distances without tiring. Hydergine tablets were given, one three times daily and increased at two-week intervals to three tablets three times daily.

3. White male, aged 43. Symptoms of multiple sclerosis twenty-three years, periods of exacerbation with remissions of five to six months' duration. The exacerbations have included paresis of arm, leg and side of face, diplopia, speech-defect and weakness. The usual treatments were tried, but remissions had not been longer than six months at a time. On September 24, 1953, Hydergine therapy was started, one sublingual tablet three times daily, which has been increased to two tablets four times daily. Improvement was noted almost immediately and has continued to date. Ataxia disappeared, weakness in arms and hands improved. There has been no exacerbation since starting Hydergine therapy.

4. White female, aged 44. Symptoms developed six months after last pregnancy terminated in 1944. The usual treatments were tried, including treatment at the Kaiser Foundation, but the

disease has shown the usual exacerbations and remissions. She is at present ambulatory but requires assistance in walking. Hydergine therapy was started September 22, 1953, one sublingual tablet three times daily. The improvement has been slow but definite, and not as marked as with the previous cases.

5. White female, aged 44. Onset of symptoms 1929, exacerbations and remissions. Usual treatments, including ACTH and Cortisone; also had treatment by many chiropractors and osteopaths. When first examined, showed marked ataxia and weakness, especially of legs and muscles of the back. Hydergine therapy was started September 13, 1953, but she stopped treatment at the end of six months because there had been no appreciable improvement in her condition.

6. White female, aged 21. Onset of symptoms July, 1951. Transitory numbness. Became pregnant and symptoms subsided until six months following birth of the child. Ataxia and speech defect became marked and was diagnosed as multiple sclerosis. She was treated by a chiropractor for nine months, then sent by him to a chiropractic clinic where intensive treatment was given for nine days; following this, she has been unable to walk without help. The symptoms of weakness, speech defect, and tremor became progressively worse until patient was confined to bed or chair. Hydergine therapy was started January 26, 1954, one sublingual tablet three times daily and increased to three sublingual tablets three times daily. There had been no appreciable improvement to date, so it was decided to add to the Hydergine program, the treatment with amino acids, folic acid and vitamins being used for progressive muscular dystrophy. The extreme weakness accompanying cases of multiple sclerosis is a condition most difficult to combat, and though not basically similar, the end result is not unlike the weakness in progressive muscular dystrophy. Therefore, it was assumed that the addition of this treatment might be effective. The combined treatment has been in use for only three weeks, so no evaluation can be made to date.

7. White male, aged 39. Patient complained of numbness in both legs in 1940 and in 1945 a diagnosis of multiple sclerosis was made. This patient's occupation necessitated the use of a hand-saw and for two years he was not able to use this implement. He was unable to drive an automobile. On April 12, 1953, he was placed on continuous Hydergine therapy, with instructions to take two tables three times daily. After two months of treatment with Hydergine he can use a hand-saw and has driven a car without fatigue for a distance of 400 miles.

8. White female, aged 23. Onset of symptoms two years ago following pregnancy; rapidly progressive with marked ataxia, weakness, rapid lateral nystagmus, tremor and speech-defect. The usual treatments did not help in any way, and the patient was soon confined to bed. Hydergine therapy was started December 10, 1953. There has been only slight symptomatic improvement since starting Hydergine, so, along with Case 6, the animo acids, folic acid and vitamin program have been added.

Discussion

Aird states that the clinical course of multiple sclerosis and the recovery which frequently follows suggest that a high percentage of the signs and symptoms observed at the peak of an episode are manifestations of abnormal physiology rather than the result of irreversible pathologic changes. Vasospasm seems to play an important role in the abnormal physiology as shown by the results obtained in acute episodes from the use of vasodilators and other procedures which produce reflex vasodilatation.

In attempting to evaluate the results obtained in these cases, it became clear that there is no yardstick adequate to measure subjective improvement and in the severe cases the improvement must be subjective at first. In the second place, regenerative processes, if there be any in nerve tissue damage by multiple sclerosis, will be extremely slow. In a period of a few months, one could not expect to obtain marked improvement in the long-standing, badly damaged, or rapidly progressive cases of this disease. Of the eight cases treated with Hydergine, one case did not respond, two were questionable and five cases responded with encouraging results.

Summary

1. Hydergine is an effective vasodilator.

2. Hydergine may offer beneficial treatment in the very early or minimal-damaged cases of multiple sclerosis.

3. Hydergine produced no hypotensive effect in those cases with relatively low blood pressure at the onset of treatment.

4. No toxic effects or allergic manifestations were observed with Hydergine.

Bacteremia in Anorectal Infections*

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SIGNIFICANCE of pathogenic bacteremia as a result of anorectal infection has not received adequate recognition. And yet, much attention has been given to bacteremia associated with other conditions. Bacteremia is known to accompany numerous physiologic and pathologic processes. According to Meleney, bacteremia is the temporary presence of bacteria in circulating blood while septicemia is defined as the persistent presence of bacteria in the blood stream. Bacteremia following urologic procedures has been reported up to 12 per cent, following tonsillectomy as high as 38 per cent, while bacteremia following oral surgery has been reported as high as 83 per cent.

Occurrence of bacteremia, from whatever source, presents a special hazard to the patient with cardio-valvular disease, agranulocytopenia, aplastic anemia, drug allergy, antibiotic resistance, diabetes, and various states of lowered resistance, for such events may herald bacterial endocarditis.

Despite numerous studies on bacteremia, there is no adequate study in existing recent literature with specific reference to incidence of positive blood cultures associated with anorectal infections and their surgical treatment. Because the syndrome of rectal bacteremia is more often overlooked than recognized, and because of the apparent absence of any similar study in the literature, an investigation of this specific problem has appeared necessary.

Procedure

A study was made to correlate preoperative and postoperative blood cultures with cultures of infectious material obtained from surgically treated anorectal abscesses in a series of thirty-five patients admitted to Temple University Hospital, Philadelphia.

Blood cultures were obtained before and after surgery, using standard, accepted technics. If cloudiness of broth was detected, samples were plated upon standard blood agar plates for identification and specific differential tests of organisms as indicated. In view of the fact that known bacteremias following surgical procedures are not unusual during an operative or immediate postoperative period, the postoperative blood culture was obtained on the average of twelve to fifteen hours following surgery in order that any positive blood culture might be interpreted with greater significance than positive blood cultures immediately following operative procedures. Thus a minimum of seventy blood cultures was obtained, with additional confirmatory cultures as needed.

Cultures of purulent material from abcesses were taken with sterile applicators, at time of surgery, and subsequently inoculated upon blood agar plates incubated at 37 degrees C. until identification of colony growth was made.

In addition to the investigative series, a control series of blood cultures, before and after operation, was taken in thirty-five patients undergoing rectal surgery in which there was no evidence of any purulent process, representing seventy additional blood cultures.

Results

Of the thirty-five patients surgically treated for abscesses, 54 per cent were males, and 46 per cent were females. The average age was 35 years, with a range between 6 months to 57 years. The most frequent abcess proved to be ischiorectal, 43 per cent of the series. Post-anal abscess occurred in

*Presented at the annual session of the Colorado State Medical Society, Colorado Springs, September 22, 1954.

26 per cent; peri-anal in 23 per cent; levator and pelvi-rectal, 5 per cent; and one, representing 3 per cent, was subsequently shown to consist of infection in the peri-anal apocrine glands, or hydradenitis suppurativa.

Associated cryptitis was found in 66 per cent, and fistula in 46 per cent of the series.

Leukocytosis was found in only 49 per cent. Fever was present in 57 per cent. Leukocytosis and fever together were present in 52 per cent.

Bacterial growth, with organism identification, was obtained in thirty-three of the thirty-five cultures of abscess material, or 94.3 per cent positive. One abscess, on subsequent pathologic diagnosis, proved to be tuberculous and one abscess was shown to have pathology consistent with lymphogranuloma venereum, although these diagnoses were not grossly apparent at surgery. E. coli was the commonest organism, isolated in 60 per cent, with staphylococcus next, 23 per cent. Bacteroides were isolated in 20 per cent, streptococci in 17 per cent, proteus in 11 per cent, diphtheroids in 6 per cent and paracolon in 6 per cent. Mixed infection was present in 49 per cent, while 51 per cent were reported to have only one organism, representing pure culture.

Identification of fecal flora was made by standard tests, including motility, fermentation, and immunologic reactions.

Results of the blood cultures were in sharp contrast to those of the purulent cultures. However, bacterial growth, with organism identification, was obtained in two patients to demonstrate an incidence of 5.7 per cent positive blood culture. Preoperative and postoperative blood cultures in two cases demonstrated positive bacterial growth, proteus in one patient, and paracolon in the other patient. In a third patient, contaminants had been found, identified as coagulase negative staphylococcus albus, consistent with skin flora rather than fecal flora.

In the control series, undergoing surgery for non-infected anorectal conditions, no positive blood cultures were obtained. A significant factor, to be considered here, is that patients undergoing surgery for non-infected conditions had, because of a routine preparation employed in elective cases, received oral sulfathalidine in amounts sufficient to alter rectal flora as determined in previous studies. This factor conceivably could alter the possibility of having obtained a positive enteric flora blood culture from the control group of patients, although the same sulfathalidine medication was given to patients with anorectal abscess, whenever practicable prior to surgery, although most abscesses present as emergencies.

Discussion

Any bacteriologic study may be subject to criticism because of inherent risk of contamination and technical error. In this investigation, however, the organisms obtained from culture of anorectal pus and from the blood, were, in the two positive instances, indistinguishable to such extent that it may be presumed that a definite clinical-bacterologic correlation existed between the abscess organism and the blood organisms. Furthermore, it is accepted that contaminants attendant to blood culture are usually of the predominant skin flora, rather than typical enteric flora consisting of the commonly motile, non-sporulating, gram-negative bacilli encountered in the anorectal abscesses described.

One of the positive correlations made occurred in a patient whose case merits a brief history. The patient, a 57-year-old white male financier, was hospitalized for treatment of a fever of unknown origin, with presumptive diagnosis of subacute bacterial endocarditis. Spiking fever up to 105 degrees F. with systolic murmur comprised main physical findings. White blood count and extensive laboratory studies, including EKG and chest x-ray, were normal. However, blood cultures with subsequent studies revealed a gram negative rod belonging to the paracolon group, resistant to penicillin but susceptible in vitro to aureomycin, chloramphenicol and oxytetracycline. Specific agglutination was positive to patient's serum. Successive courses of the above mentioned antibiotics were given, with recurrence of fever after each medication. Repeated blood cultures revealed the same organism, with irregular lactose fermenta-

tion. After sixty-two days of hospital treatment, punctuated by periodic searches for foci of infection, rectal examination revealed the presence of a tender mass and inflamed anal crypts. Previous rectal examinations had been assertedly negative. The patient had received in consecutive order, chloramphenicol, penicillin, streptomycin, oxytetracycline, aureomycin, polymyxin, in repeated courses, as recommended by a series of consultants. Following recognition of the anorectal abscess and cryptitis, surgical treatment was instituted, consisting of excision of abscess and cryptectomy. Culture of the purulent material from the abscess revealed a gram-negative, motile rod with irregular lactose fermentation, believed to be B. proteus and having the same characteristics of the organism isolated from the blood. It was thought that the organism represented a paracolon proteus-like mutant, altered by the effect of various antibiotics. The first postoperative blood culture, the day following surgery, revealed the same organism. Subsequent blood cultures were negative and no further isolations could be made. The patient became afebrile and was subsequently discharged January 2, 1953, after a documented period of hospitalization of six months' duration. The patient remained asymptomatic thereafter.

The second positive case, with pre-operative and postoperative blood culture correlated with abscess cultures, revealed a penicillin-resistant, oxytetracycline-susceptible, lactose - fermenting, gram - negative bacillus classified in the B. paracolon group.

Summary

Although the incidence of rectal-induced bacteremia in this study was confined to paracolon-proteus mutants, the fecal flora includes between fifteen and twenty other identifiable organisms. A mortality rate of 10 per cent occurring in a series of selectively treated bacteremias with E. coli was recently reported by observers at the Mayo Clinic following surgery. Fecal flora studies show approximately one billion organisms per gram of wet feces, with the coliform group comprising 70 per cent of these. Any organisms of the fecal flora may potentially cause pathogenic bacteremia. A positive blood culture will usually not persist unless there exists a focus for repeated entry, or unless the defensive mechanisms are ineffectual. Because of the fecal flora and because of the anatomic disposition of anorectal structures, there exists a frequently unrecognized source for bacteremia.

Conclusions

1. Pre-operative and postoperative blood cultures have been correlated, in a series of thirty-five patients, with cultures of purulent material obtained from anorectal abscesses undergoing surgical treatment.

2. An incidence of 5.7 per cent positive blood cultures has been demonstrated in association with anorectal infections, with positive correlation between the blood organisms and the abcess organisms.

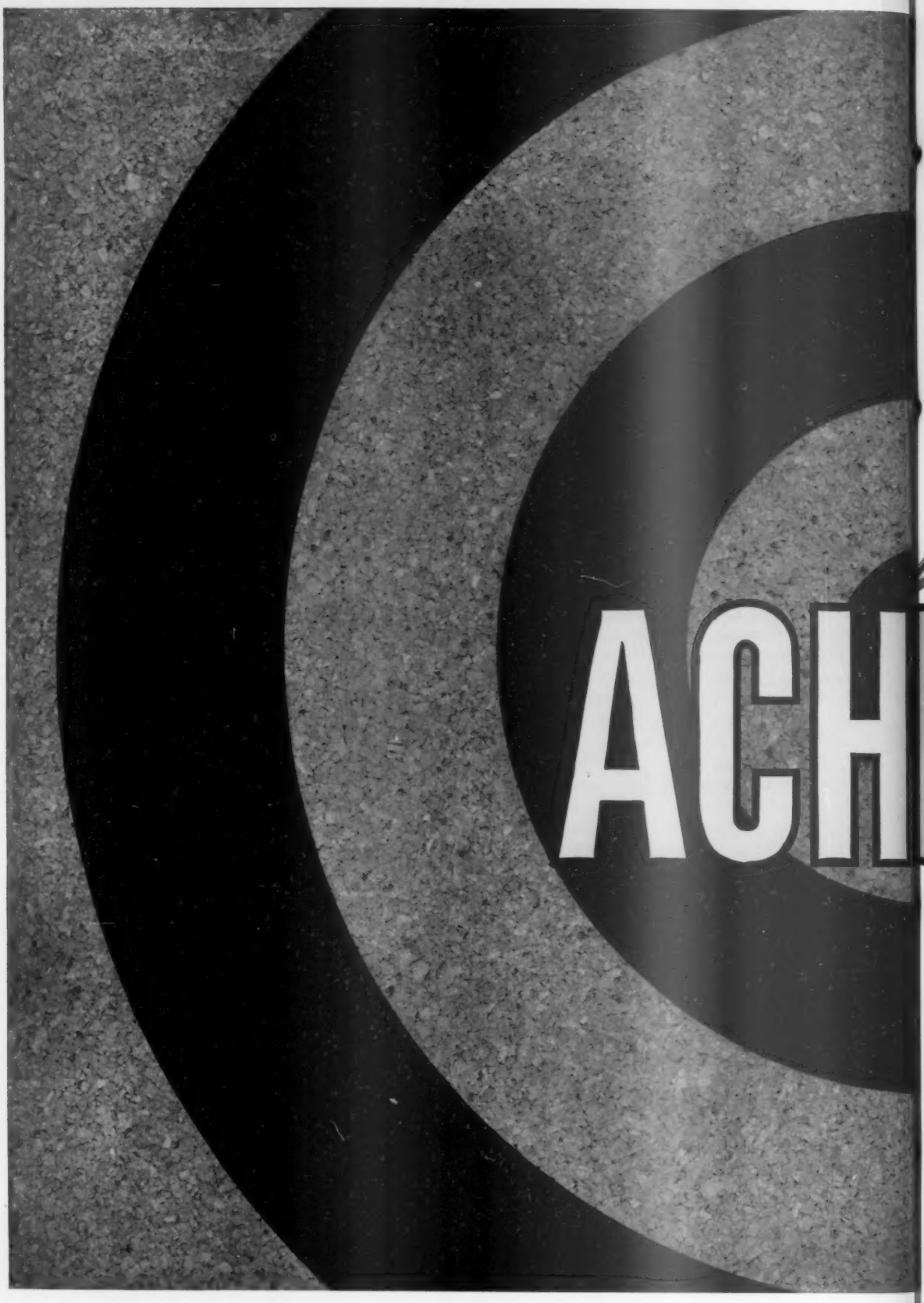
3. Proteus and paracolon bacilli were found to cause pathogenic bacteremia in the series of patients studied.

4. Failure to institute proper surgical treatment of anorectal infections, including cryptitis, may be attended with failure to protect the patient from pathogenic bacteremia despite the use of any current antibiotic.

AWARD TO "MARCH OF MEDICINE" MENTAL ILLNESS SHOW

In recognition of the "outstanding contribution to public understanding of the problem of mental illness" the American Medical Association and Smith, Kline & French Laboratories recently received a citation from the National Association for Mental Health. The award was for the "March of Medicine" telecast entitled "Search for Sanity" which was presented by Smith, Kline & French and the A.M.A. October 31 over the NBC-TV network. This program reported on the care and treatment of mental patients and on research projects now being conducted in the field.

Dr. Leo H. Bartemeier, chairman of A.M.A.'s Council on Mental Health, accepted the award on behalf of the A.M.A. in Philadelphia.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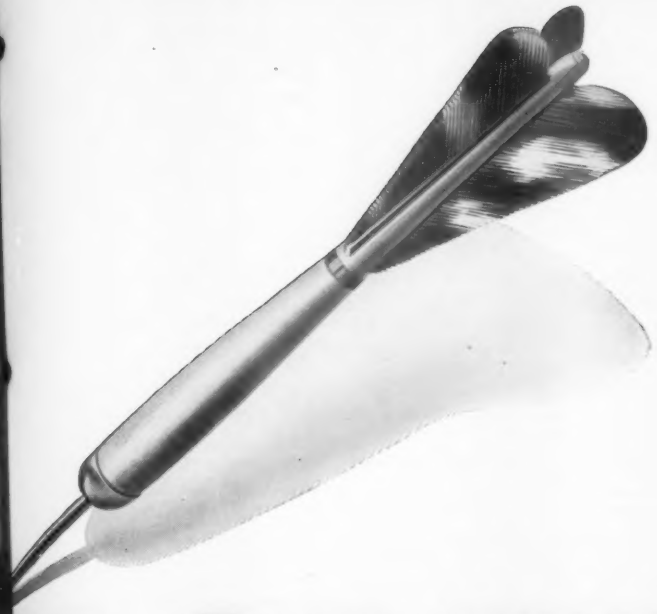

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Hemipelvectomy and Cystectomy for Metastatic Carcinoma of the Pelvis*

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Salt Lake City

THE indications for doing a hemipelvectomy in malignant diseases have been well established. More recently the procedure of pelvic evisceration with the construction of an artificial bladder from the terminal ileum has been shown to be of value in selected cases. The following case illustrates a pathological situation where both procedures were combined in order to prolong the comfortable, useful life of a patient.

CASE REPORT

This patient was first admitted to the L.D.S. Hospital in February, 1949. A diagnosis of carcinoma of the rectum was made and an abdominal perineal resection was done. The pathological report indicated a very malignant type of lesion and the prognosis given to the relatives was grave.

He was well following this operation until July, 1952, at which time he developed back pain that radiated into the left buttock and into the left leg. He was readmitted to the L.D.S. Hospital on December 17, 1952, where he was kept for a few days' study. Intrathecal alcohol injections were done on three occasions with the hope of alleviating the pain; however, the pain was not significantly affected by these procedures. For the third time he was admitted to the L.D.S. Hospital on February 9, 1953. At that time intrathecal absolute alcohol was injected again and he was discharged without any significant change in his symptomatology. He was re-admitted for the fourth time on February 25, 1953. At this time, laminagrams were done and it was decided that the patient had a cyst of some sort at the lower end of the spine. This was surgically explored. The nature of the cyst is rather obscure from the records; however, removal failed to relieve his pain. During this admission a chordotomy was done at the level of D-4. The chordotomy had no significant effect upon the excruciating pain the patient was having in his buttocks and legs, and immediately following the chordotomy the patient had paralysis and sensory change in the left lower extremity. He was discharged without any significant improvement in his status and in some respects he was worse.

Following this operation it was necessary for him to wear braces and use crutches because of the paralysis in the lower extremity.

The patient was first studied at the Memorial Medical Center during the month of August, 1953, following which he was admitted to the L.D.S. Hospital on September 18 for a laparotomy. This exploration* disclosed the presence of a circumscribed, hard tumor in the vicinity of the greater sciatic notch which involved the sciatic nerve and the great vessels in that area. It was also noted during exploration that the bladder and prostate were invaded by the tumor. The vessels on the opposite side of the pelvis and the aortic nodes were inspected for possible metastases, but none were found. There were no metastases in the peritoneal cavity either. A complete x-ray metastatic series done at this time disclosed no evidence of metastases. This patient was next admitted to the Holy Cross Hospital in October, 1953. Initially he was taken to the operating room where an artificial bladder was fashioned from eight inches of terminal ileum and the ureters were transplanted into it. One end of the ileal bladder was brought out as an ileostomy in the right lower quadrant, opposite his colostomy. At that time the bladder was partially mobilized in anticipation of cystectomy. Two weeks after the ureteral transplant to the ileal pouch, the patient was again taken to surgery, where a combined hemipelvectomy and cystectomy were done. In order to completely circumscribe the tumor growth, it was necessary to ligate the left common iliac artery and vein at the level of bifurcation of the aorta. A major portion of the sacrum was removed with the specimen. The pathological report disclosed that the tumor mass had invaded the gluteal musculature, the great vessels of the pelvis and the sciatic nerve on the left. There was also invasion of the prostate and the urinary

*From the Surgical Service, Memorial Medical Center, and the Holy Cross Hospital, Salt Lake City, Utah.

*Done by Dr. Lenore Richards, Department of Surgery, Memorial Medical Center.

bladder on the left side. The pathological studies which followed indicated complete removal of the tumor.

It was necessary ten days after the hemipelvectomy to do a secondary closure of the wound because of marginal slough. After that the patient did well for several months except for occasional difficulty with dysphagia. This symptom when fully studied proved to be due to extensive esophagitis. With medication the esophagitis improved. At present he still has periods when he has difficulty with swallowing. Films for evidence of metastatic spread of this tumor have been negative. The chest plate has always been normal. It is believed that the esophagitis is the result of ingestion of a large amount of tabloids which the patient had taken for the two years prior to his last surgery. The ileostomy opening was covered immediately postoperatively with a Rutzen bag and it has functioned very well. The patient only re-glues his bag on an average of once a week. He eats well and has developed good musculature. He has been able to return to work and conduct his business as a real estate broker. He does have periods of marked depression, part of which is believed to be due to withdrawal symptoms from codeine. His blood urea nitrogen, carbon dioxide combing power and total chlorides have remained normal. It has never been necessary to put him on urinary antiseptics. Intravenous pyelograms taken five months postoperatively show dilatation of the right renal pelvis of minor degree. The patient ambulates with crutches and with a wheelchair.

Comment

Fortunately such an extensive procedure is seldom indicated. Several features worth emphasizing made the indication more clear-cut in this case:

1. The slow-growing locally invasive nature of the tumor without metastases.
2. The already nearly useless left lower extremity with uncontrollable pain.
3. The fact the bladder wall was invaded by tumor and painful urinary symptoms were about to follow.
4. The strong desire of the patient to have surgery even though he knew the risk was great and that a favorable result was not assured.

Summary

A case where hemipelvectomy, cystectomy, prostatectomy and ureteral transplantation into an ileal pouch in order to eradicate malignant disease is presented.

Radioactive Iodine in Treatment Of Pulmonary Emphysema*

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ADVANCING age of the population and decreasing mortality in pulmonary infections have focused attention on the increasing problem of pulmonary emphysema. At best, the treatment of chronic pulmonary insufficiency has been disappointing and in most instances of only temporary value. Even where the patient appears much improved, a superimposed respiratory infection has been sufficient to upset the delicate cardio-respiratory balance with resultant pulmonocardiac failure. Evidence of the increasing awareness of the problem presented by pulmonary emphysema is shown by the growing list of publications in recent years. It is our own impression that numerically pulmonary emphysema will become the most important disabling chest disease.

A review of the important investigations bearing on physiology and management of pulmonary emphysema has been expertly presented by Segal and Dulfano in their book, Chronic Pulmonary Emphysema—Physiopathology and Treatment.[1] After applying all of the recommended therapeutic

*Presented before the annual session of the Colorado State Medical Society at Colorado Springs, September 21-24, 1954. The authors are indebted to Dr. Leighton Anderson of the Cardiopulmonary Laboratory at the University of Colorado Medical Center for the Physiologic Function studies.

measures in management of pulmonary emphysema, a large group of intractable cases still remains. In this group of cases the disability is so severe that even slight activities, such as walking from bed to toilet, eating, or mere combing the hair, may become major efforts. Symptoms such as increased cyanosis, dyspnea, and tachycardia ensue. It is in this group of cases that additions to our therapeutic armamentarium are needed. In addition, as new technics in treatment are added, new problems such as respiratory acidosis present themselves and it becomes necessary to review fundamental chemistry and physiology to prevent and to treat this serious complication.

In several papers, Blumgart and his coworkers reported beneficial results in angina pectoris and congestive heart failure by production of a hypothyroid state. This was originally accomplished by surgical thyroidectomy,[2] and more recently by radiation thyroidectomy through the use of radioactive iodine (I-131).[3] The rationale seems roughly as follows: lowering of the basal metabolic oxygen needs makes available a relatively larger amount of tissue oxygen for other purposes than the basal state. This becomes especially important where a severely restricted amount of tissue oxygen is present. In approximately two-thirds of the cases thus treated there has resulted a substantially greater activity by the patient before distressing symptoms appear.

Stimulated by the work of Blumgart, consideration was given to the possible beneficial results of using I-131 in the parallel problem presented by intractable pulmonary emphysema. Here, too, the tissue oxygen needs are restricted by increased residual air and lowered arterial oxygen saturation. The loss of pulmonary reserve in pulmonary emphysema presents a clinical picture paralleling the loss of cardiac reserve in congestive failure. Lowering the basal metabolic level therefore appears to be as logical in pulmonary disease as in cardiac disease.

It is probable that cor pulmonale is present in some degree in all cases of severe pulmonary emphysema. It appears logical to treat such cases with I-131 in order to diminish the stress on the right heart and pulmonary vascular bed before severe secondary cardiac disease develops. The added procedure, as in Blumgart's therapy of heart disease, [2,3] would require that the patient be maintained on established methods of therapy as well. With these thoughts in mind we treated our first case of severe pulmonary emphysema in July, 1953, and since then have treated a total of twelve cases up to September, 1954.

All patients were hospitalized at General Rose Memorial Hospital in Denver, for study and treatment. Seven had histories of soft coal mining for an average of thirty years and had been referred through the Denver office of the United Mine Workers' Welfare and Retirement Fund; the others had various business backgrounds. There were eleven men, ranging in age from 56 to 69 years, and one woman, aged 44 years. Chest roentgenograms, blood studies for protein bound iodine, I-131 tracer studies, and total cholesterol and esters were done before and after treatment. All patients were studied by electrocardiogram and nine of the twelve cases showed changes consistent with cor pulmonale. Eight of the twelve cases gave histories of bouts of congestive failure, while five of the eight were in congestive failure during treatment with I-131.

Nine of the twelve cases were studied in the Cardiopulmonary Laboratory of the University of Colorado Medical Center. Maximum Breathing Capacity ranged from 14 L to 30 L in eight cases (15 per cent to 36 per cent of predicted values), while the ninth case was 42 L (46 per cent of predicted). The timed vital capacity showed an output in three seconds of 35 per cent to 63 per cent, with the ninth case 98 per cent. Residual volumes ranged from 51 per cent to 80 per cent in eight cases, while the remaining case mentioned above was 57 per cent, indicating a severe emphysema in spite of the normal timed vital capacity.

All of the twelve patients had been treated with bronchodilator drugs by mouth, nebulizer, and by intermittent positive pressure breathing machines (Bennett or Mine

Safety Appliance) with only slight benefit. Three of the twelve patients had been given pneumoperitoneum treatment with symptomatic benefit for a few months. Breathing exercises, corticotropin and cortisone, phlebotomies for hypervolemia, as well as other modalities of treatment had been applied without much benefit.

Except for the first two patients, 200 mg. of propylthiouracil was given daily for about one week and discontinued forty-eight hours before the blocking dose of I-131. Three patients received two doses, while the remaining nine received in one dose an averaging of 45 mc. of radioactive iodine. Tracer studies done after three months showed an average I-131 uptake of 5 per cent to 10 per cent. The one patient who showed an uptake of 12 per cent had become clinically hypothyroid and had a protein bound iodine value of 1.2 micrograms There were no serious complications although radiation thyroiditis was severe in several instances but controlled with medication.

Recent advice from Blumgart[4] indicates that he has encountered some radiation thyroiditis in therapy of heart disease which has been diminished by dividing the dosage of I-131 into smaller repeated doses at weekly intervals. Later supplements have been given at monthly intervals if the initial course of I-131 therapy proved inadequate. Future series will, therefore, include cases given multiple smaller doses in an attempt to avoid or diminish the degree of radiation thyroiditis. Blumgart[4] also recommends that propylthiouracil be omitted as preparation in order to diminish the incidence of radiation thyroiditis.

Of the twelve cases, eight have had their studies completed and all are improved. Another patient is clinically better but follow up studies are not complete. One patient died three months after I-131 was given, in severe congestive failure. Another patient who was markedly improved was found dead and was probably a suicide. One last case had one dose of I-131 without effect and later died of congestive heart failure before a second dose could be given.

The improvement noted has been gain in appetite, gain in weight, a sense of well being, and an increase in exercise tolerance. The anxiety associated with the sensation of smothering, noted in so many severe cases of emphysema, is diminished in our completed cases. In some instances there have developed various degrees of hypothyroidism sometimes requiring small doses of thyroid substance for optimum comfort.

Up to this time, we have treated only the most severe cases of pulmonary emphysema. Obviously all other measures should be tried first. While radioactive iodine should still be used only for intractable cases at this time, it should be expected that cardiac complications in such cases may be so advanced that good results may not be forthcoming. On the other hand, this must be regarded as a preliminary report and as more experience is gained with this modality of treatment, it may prove worthwhile to use I-131 on earlier cases before serious disability ensues.

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CORRECTION

Captions under the x-ray films reproduced on Page 1063 of this Journal's December, 1954, issue in the article "Unusual Complications of Intestinal Intubation" by E. J. Drouillard, M.D., and others, were erroneously reversed, which would make it appear that there was more mercury in the lung fields after three months than was originally present. We apologize for our proof-readers to Drs. Drouillard, Cox, and Blegen.

Treatment of Tearing In the Infant*

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Pueblo, Colorado

TEARING of the infant's eye is not too uncommon and a problem many of us are called on to treat. As is true in all branches of medicine, proper treatment depends upon establishing the underlying cause. Although the basic treatments for the various causes of tearing have not changed in the past few years, we feel it may be well to review the subject and call attention to some points which are not emphasized too much.

The more common causes of epiphora in the infant are a chemical conjunctivitis due to the use of silver nitrate drops at birth, bacterial and viral conjunctivitis, and tearing due to an imperforate nasolacrimal duct. Rarely a foreign body or inverted cilia irritates the eye and causes excessive lacrimation, but simple inspection will establish the cause in these cases.

Sometimes the instillation of silver nitrate drops as a prophylaxsis against gonorrheal conjunctivitis causes an inflammatory reaction in the newborn's eye, which occurs within the first twenty-four hours of life. Cultures and smears of the conjunctiva are negative. Treatment consists of gentle irrigation of the eyes with normal saline and the instillation of cortisone ophthalmic drops (0.5 per cent) in the involved eye to partially block the inflammatory reaction. Following treatment the eyes clear up in twenty-four to forty-eight hours with no sequelae.

Fortunately the dreaded gonorrheal conjunctivitis is becoming a disease of the past due to better prenatal care and the universal technic of instilling silver nitrate drops in the infant's eye at birth. Thygeson[1] found only one case of gonorrheal infection of the conjunctiva in a series of 261 cases of opthalmia neonatorum occurring in a group of 3,939 births.

The disease begins on the second or third day of life with a serous discharge which rapidly becomes purulent. Before the day of antibiotics the cornea often became involved. Prior to penicillin, treatment consisted of cold packs to the involved eye and use of fever therapy. However, if the cornea was ulcerated and a perforation of the globe imminent, fever therapy was not given. Many eyes were saved with the above therapeutic regime, but a number of these salvaged eyes had dense corneal opacities as an aftermath of the corneal ulceration.

A tentative diagnosis of gonorrheal conjunctivitis is made as a result of finding gram negative diplococci growing and multiplying in epithelial cells scraped from the conjunctiva. A positive diagnosis may be made only following culture studies.

Treatment should be instituted immediately and consists of systemic penicillin and the use of penicillin eye drops. Pus that accumulates in the conjunctival fornices should be gently washed away with normal saline, but great care must be taken not to damage the corneal epithelium. If the infection is uniocular the uninvolved eye should be protected with a shield. With the early institution of proper treatment the inflammation will promptly subside without ocular damage.

In the previous mentioned series of cases of opthalmia neonatorum Thygeson found the chief bacteria cultured from the eyes to be a staphylococcus aureus which was the etiological cause in 51.7 per cent of the cases. Diplococcus pneumoniae was cultured from 13 per cent of the infected eyes and in 8.8 per cent of the cases inclusion bodies were identified in the smears, enabling the examiner to make a diagnosis of inclusion blennorrhea. Other bacteria

*Presented before the annual meeting of the Colorado State Medical Society at Colorado Springs, September 21-24, 1954.

cultured were Escherichia coli, Hemophilus influenzae and Streptococcus viridans.

Infections of the conjunctiva due to bacteria are characterized by the presence of considerable pus in the conjunctival fornices. Discharge may be copious enough to suggest a gonorrheal conjunctivitis. The correct diagnosis is established by staining a smear of the conjunctiva with a Gram stain and also obtaining a culture from the conjunctiva. One point to keep in mind is that Neisseria meningococcus, a gram negative diplococcus, can cause a severe purulent inflammation of the eye. Culture studies are necessary to differentiate an ocular inflammation due to Neisseria meningococcus from Neisseria gonorrhocae as they both appear similar in a smear. Treatment of inflammation of the conjunctiva due to bacteria other than the gonococcus consists of the use of some type of an antibiotic eye drop. Our office prefers a prepared ophthalmic Chloromycetin preparation. However, Gantrisin, Terramycin, Aureomycin, or Sulfacetamide drops are equally effective. Penicillin eye drops quite frequently cause a severe allergic reaction of the lids and for this reason we do not advise their use except in a suspected case of gonorrheal conjunctivitis. We prefer to use antibiotic solutions rather than ointments because of the mechanical washing effects of the drops. Ointments tend to hold the secretions in the conjunctival fornices.

If the conjunctival inflammation is due to a virus the discharge is usually more watery and not so purulent as in infections due to bacteria. Thygeson[2] has recently shown that the virus which causes inclusion blennorrhea of the newborn is the same virus which causes swimming pool conjunctivitis of the adult.

In the infant this virus disease begins usually within the first week of life. The lower lid is involved with a papillary hypertrophy of the conjunctiva. Diagnosis of inclusion blennorrhea is established by the finding of cytoplasmic inclusion bodies in epithelial cells scraped from the conjunctiva. This inflammation may last for several weeks but fortunately there are no sequelae and eventually the eye heals completely. There is no specific treatment for the infection but the use of a sulfa preparation such as sulfathiazole or gantrisin is claimed to shorten the course of the disease.

The last cause of tearing which we wish to discuss is epiphora due to an imperforate nasolacrimal duct. In the previous causes of lacrimation in infants, discharge was present at the onset of the pathological process and treatment was instituted immediately. However, in the present condition being discussed, symptoms usually do not appear until after the mother takes the infant home from the hospital. The onset is usually gradual and infection of the tear sac may not develop until several weeks after the onset of epiphora. For these reasons the doctor frequently does not see the infant until the second or third month of life for treatment of lacrimation and dacryocystitis due to a blocked nasolacrimal duct.

In order to better understand the treatment for this last cause of tearing we will briefly discuss the embryological development of the lacrimal passages.

The nasolacrimal duct is formed from a cord of epithelial[3 5] cells which become detached from the surface of the ectoderm in the area of the naso-optic fissure in fetal life. This cord of cells buries itself in the mesenchyme beneath the epidermis and becomes the forerunner of the nasolacrimal passages. The buried epithelial cells extend superiorly to the developing lids and form the superior and inferior canalicular cords and the cells also extend inferiorly and nasally to reach the nasal mucous membrane in the area of the inferior meatus. Canalization of the cord of cells begins about the third month of embryonic life. The formation of a lumen proceeds much more rapidly at the ocular end of the nasolacrimal duct than the nasal end. It is this failure of canalization of the nasal end of the lacrimal duct at birth which cause epiphora and later dacryocystitis in the infant.

The incomplete canalization of the nasolacrimal duct is fairly common at birth as evidenced by the following figures: Cassady[4] quotes Schwartz who examined 207 nasolacrimal ducts in fetuses 8 to 10 months old; 25 per cent of the fetuses had an im-

patent duct. In his own series Cassady found 75 per cent of the ducts to be incompletely canalized at birth. The reason the incidence of tearing due to an imperforate nasolacrimal duct is not greater is due to the absence of tears at birth and the fact most ducts open spontaneously shortly after birth. Because of this fact the proper treatment of tearing and dacryocystitis in the newborn depends on the age of the infant. If the condition is present at birth conservative therapy should be tried. We recently treated a baby who had dacryocystitis which developed on the second day of life. The infant was given systemic penicillin and pressure was applied over the tear sac with the finger in such a manner as to force the contents of the sac into the nose. On the third day considerable pus issued from the nose while massaging the lacrimal sac. With the passage of pus and establishing drainage between the lacrimal sac and the nose the dacryocystitis subsided promptly and the baby has had no further trouble. This case was unusual because of the early onset of inflammation of the tear sac and because of the large amount of pus present. The case also demonstrates the fact that with early conservative treatment a large percentage of cases of dacryocystitis in the newborn will clear up.

If the dacryocystitis does not respond to this type of management, probing of the nasolacrimal duct is necessary. However, this should never be done when the condition is acute as the trauma of passing the probe may well cause the inflammation to spread to the peri-orbital tissues.

Although tearing in the infant due to an imperforate nasolacrimal duct appears within the first month of life, frequently the parents do not bring the baby to the doctor's office for several months. Usually by this time the baby has developed a chronic dacryocystitis. Pressure over the lacrimal sac forces pus through the superior and inferior canaliculi into the conjunctival fornices. When the stenosis of the nasolacrimal duct has persisted for several months, simple massage will not open the duct. Systemic penicillin will frequently temporarily allay the dacryocystitis but when the penicillin is stopped the inflammation and tearing return. Probing of the nasolacrimal passages is necessary to completely cure the condition. In the majority of cases one probing is enough but occasionally the procedure may have to be repeated.

In summary we see that there are several causes for tearing in the newborn. In order to establish the correct diagnosis a conjunctival smear and culture should be done on an infant's eye that shows any pus within the first two weeks of life. Because the parents usually bring the infant to the doctor several weeks to several months after the onset of tearing, probing of the nasolacrimal duct is usually necessary when epiphora is due to a blocked duct. However, if cases due to the last cause are seen early simple massage of the lacrimal sac will cure some of them.

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[3]Mann, I.: The Development of the Human Eye. New York, Grune and Stratton, 1950—p. 258.

[4]Cassady, J. V.: Dacryocystitis of Infancy. Am. J. Ophth., 31:773, 1948.

[5]Cassady, J. V.: Development Anatomy of Nasolacrimal Duct. Arch. Ophth., 47:141-158 (Feb.) 1952.

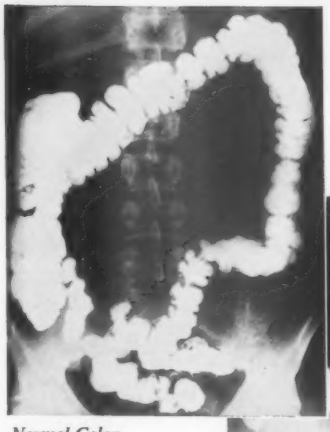
NEW "MARCH OF MEDICINE" SERIES SLATED

The "March of Medicine" television program once again will bring to the American people the latest reports of medical progress across the nation. The first program in the spring 1955 series will be carried over the National Broadcasting Company's television network on Sunday, February 26. Other programs will report on activities at various national medical meetings—culminating in coverage of the American Medical Association's Annual Meeting in Atlantic City during the week of June 6-10.

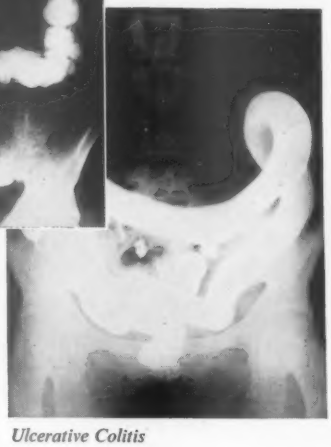
The tentative schedule calls for programs during the weeks of March 28, April 26 and June 6. Plans also are under way by the sponsors—Smith, Kline & French Laboratories and A.M.A.—to present a three-program series in the fall.

Further details will be announced later. Watch your local newspapers for time and station of the shows in your area.

METAMUCIL® IN CONSTIPATION



Normal Colon



Ulcerative Colitis

Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

The Enzylac Process of Modifying Milk*

ARNOLD B. STORRS
Chicago

FROM the earliest records of history there is ample evidence that man was appropriating the milk of various mammals for his own nutritional needs. As civilization progressed, and as man's knowledge increased, so did the utilization of milk and milk products until ultimately milk was recognized as perhaps the most important of our basic foods.

Although milk is of value in the diets of all ages, it is essential for infants and children and is highly recommended for many of the elderly, if proper nutritional balance is to be maintained. Thus, it is of greatest utility at either end of our life span.

Studies of milk modification to improve digestibility have been pursued for a long time, and many methods have been employed for accomplishing this end. One of the more recent processes which has achieved commercial significance as a method of modifying milk is the Enzylac Process, a method whereby the milk is slightly predigested during pasteurization by the action of a proteolytic enzyme. The enzyme is derived from the pancreas and is prepared and standardized for a definite degree of activity upon the milk proteins.

In practice, a very small amount, about one part to fifteen thousand parts of milk, is added to raw milk just before pasteurization is begun. During the time the milk is being heated and pasteurized, the enzyme becomes active and hydrolyzes the milk protein to a limited extent. The heat of pasteurization is sufficient to finally destroy the enzyme and thus prevent it from completely digesting the milk. The hydrolysis which is accomplished amounts to about one per cent of that theoretically possible for complete digestion. The process is readily adaptable for commercial application and provides a simple, convenient means whereby a dairy may be enabled to supply a suitable modified milk to its customers.

The effect of this mild hydrolysis upon the physical and chemical properties of the milk is quite significant. It improves the curd forming properties of the milk, with respect to digestibility, by lowering the curd tension and promoting the formation of much softer, more flocculent curds. From a mechanical point of view, such curds may be handled with much greater ease in the stomach. In addition, the direct modification of the protein itself encourages easier and more rapid chemical breakdown of the protein in subsequent digestion. This is believed to be due to what has been termed a "conditioning" effect, whereby the inner structure of the protein molecule is weakened by mild hydrolysis prior to the actual cleavage of splitting of the molecule. A comparable "conditioning" effect has been observed in other protein systems as a result of mild hydrolysis.

The Enzylac treatment is, therefore, a physiological means of milk modification, utilizing naturally occurring digestive enzymes in direct action upon the curd forming element of the milk, the protein. As such, it can be applied with equal facility to either whole milk or skim milk as the need might be indicated.

Enzylac does not differ in appearance or flavor from fresh, pasteurized milk of good quality. The cream line is not affected by treatment and the cream layer may be poured off if it is desired to reduce the fat content of the milk. With respect to flavor, other work has shown the Enzylac Process to provide a highly effective antioxidant effect in the milk so that the original fresh flavor is frequently maintained for a much longer period than untreated milk.

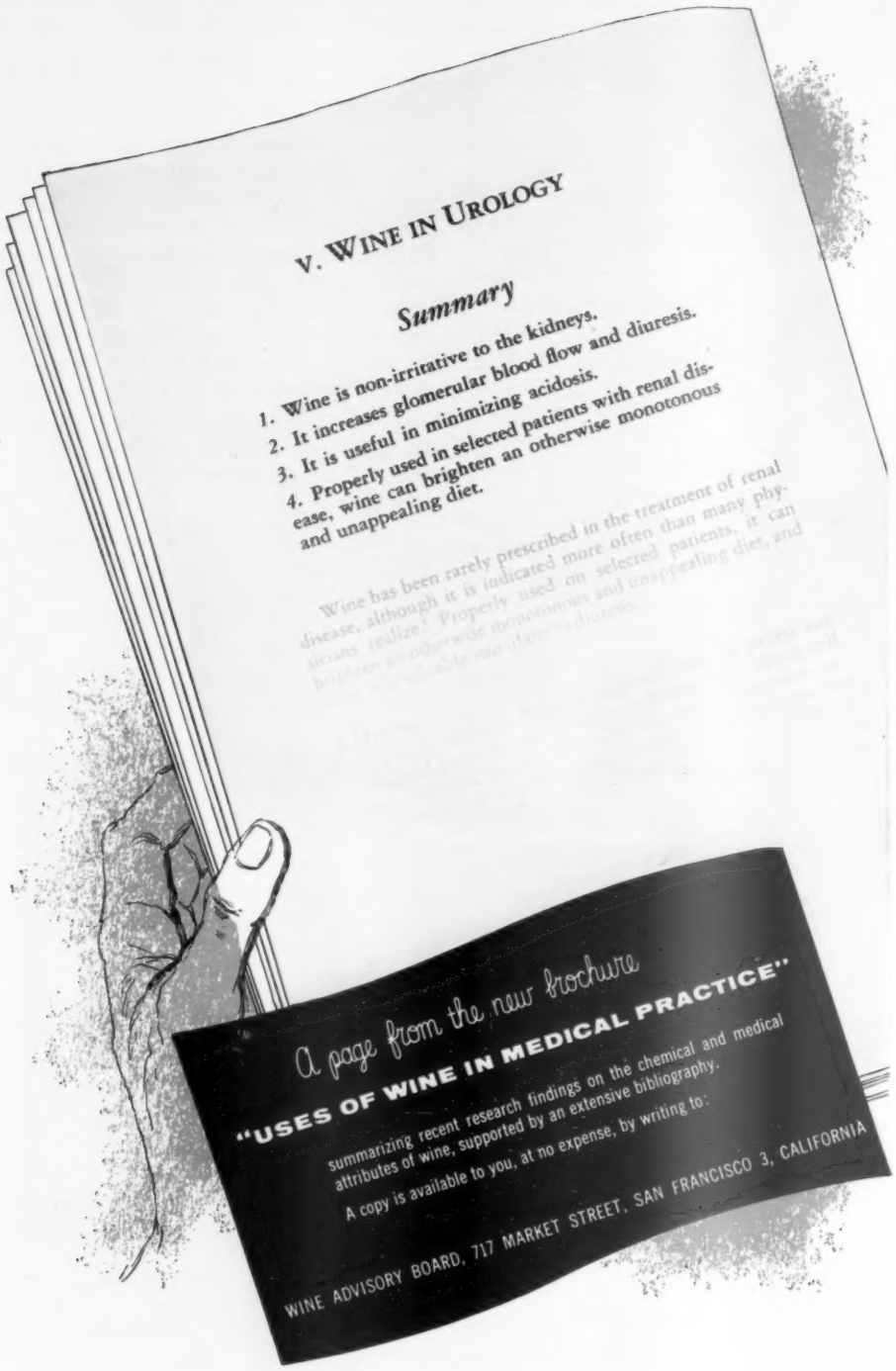
*Reprinted from Certified Milk (May, 1953), official publication of the American Association of Medical Milk Commissions, Inc., and Certified Milk Producers Association of America. The author, at the time of writing, was in the Research Division of Armour & Co.

Extensive clinical investigations of Enzylac milk with both full term and premature infants have yielded very good results. As compared to the control groups, the Enzylac-fed infants showed normal height and weight gains, better tolerance of the milk, better absorption of nutrients, less diarrhea and a lower incidence of upper respiratory infections. In addition, since Enzylac looks and tastes like good fresh whole milk, little, if any, difficulty was encountered in the transition to commercial milk as the infants grew older. In general, undiluted and unboiled Enzylac proved to be excellent for feeding both the premature and full-term infants.

Becase of its improved curd forming characteristics, Enzylac need not be boiled to enhance its digestibility in formula making. In the clinical investigations the so-called "cold" method of formula preparation was employed, adding the usual supplements to the cold fresh Enzylac and maintaining the formula at refrigeration temperature until warmed just before feeding. This resulted in considerable timesaving in handling and preparation of the formulas, and in so doing reduced materially the opportunities for chance contamination or the growth of unusual bacterial types. In the home, simplicity in formula preparation is important for it offers less inducement toward short-cuts or carelessness than would be the case in preparing complex formulas.

What has been pointed out above with respect to the modification of milk for infants is also applicable to a large degree in the case of the sick or aged. In some instances of illness or post operative care, the system will tolerate nothing but liquids or a very bland diet. In many of these cases a milk of easier digestibility, such as Enzylac, can be used to advantage. For similar reasons it should have a place in the diet of the aged or infirm whenever maximum utility with minimum effort on the part of the digestive system would be desired.

To sum up, Enzylac is a fresh, pasteurized milk, modified for improved digestibility by controlled treatment with natural digestive enzymes. Its distinctive properties make it a milk which can be recommended for use in infant feeding, for special dietary purposes, or for general consumption.


V. WINE IN UROLOGY
Summary
1. Wine is non-irritative to the kidneys.
2. It increases glomerular blood flow and diuresis.
3. It is useful in minimizing acidosis.
4. Properly used in selected patients with renal disease, wine can brighten an otherwise monotonous and unappealing diet.
A page from the new brochure
"USES OF WINE IN MEDICAL PRACTICE"
summarizing recent research findings on the chemical and medical attributes of wine, supported by an extensive bibliography.
A copy is available to you, at no expense, by writing to:
WINE ADVISORY BOARD, 717 MARKET STREET, SAN FRANCISCO 3, CALIFORNIA

The Washington Scene

A monthly news summary from the nation's capital by the Washington Office of the A.M.A.

With the 84th Congress well into its first session, all indications point to an active year in medical legislation. Many of the bills will founder somewhere along the way, but as of now an imposing number are lined up awaiting consideration in Senate and House.

Confirmation that medical problems rank high in the administration's work schedule for Congress came early in January in President Eisenhower's State of the Union Message. This is the address, delivered in person before a joint meeting of Senate and House, in which the President annually outlines in general terms the condition of the country and the new legislation he believes should be enacted.

This message highlighted the President's objectives, but did not tell in specific terms how he expected to reach them. The details came later, in five additional messages to Congress, including one on health on January 24. The President wants Congress to take action on the following health and medical items:

1. A federal health reinsurance service. This idea was rejected by the House last year, but neither Mrs. Hobby nor Mr. Eisenhower has given up hope for it.

2. A plan to insure better and more uniform medical care for public assistance recipients through larger U. S. appropriations and more administrative controls.

3. Federal assistance in construction of health facilities and in providing more trained health personnel (other than physicians).

4. A new federal program to combat mental illness and return more mental patients to useful lives outside institutions.

5. An improved federal program for aiding crippled children and for maternal and child health.

6. Strengthening of the pure food and drug laws to give greater consumer protection.

7. More attention to "the increasingly serious pollution of our rivers and streams and the growing problem of air pollution."

8. An expanded program for the medical care of military dependents.

9. A voluntary health insurance program for federal civilian employees, with U. S. contributions and pay roll deductions authorized for the employees.

So much for what the Republican President hopes to get through Congress. It is too early to say how much of this program will have the support of the Congress, now under Democratic control. It is clear, however, that many leading Democrats want to enact some legislation the President didn't include in his program. In the early weeks of the session they introduced scores of bills to carry out their ideas.

Federal aid to medical education is prominent in the plans of many of the Democrats, and some of the Republicans. The bills cover a wide range, some restricted to construction grants but others offering help in meeting operating expenses and incentives to increase the number of students. Other bills offer federal grants to voluntary health plans to subsidize coverage of the indigent, the "medically indigent," the unemployed and the aged. Because the administration has declared itself opposed to subsidies, it is unlikely that any measures of this type will win the support of Mrs. Hobby's department and the White House.

Members on both sides of the aisle also are proposing greater emphasis on research seeking the causes and cures of such diseases as cancer, heart disease, mental illness and arthritis. Some of these bills fit in with the Eisenhower program and philosophy, and are likely to have White House support at the hearings.

This tendency to stimulate more basic medical research, both at the federal level and through state grants, may be an important factor when Congress gets around to passing the appropriation bills for the various Institutes of Health, the research arm of U. S. Public Health Service.

Some years ago a Democratic Congress took a serious interest in a bill for federal aid to local public health departments. Some of the influential Democrats have revived this idea, and are working for its passage this session. As expected, the old Truman-Ewing plan for national compulsory health insurance again is before Congress. The first one to introduce a bill along these lines was Rep. John D. Dingell, a sponsor of the original plan. Later others joined with him in backing the idea, but up to now the open support for it is not extensive on Capitol Hill.

DON'T LET THOSE TAX FORMS GET YOU DOWN

If higher mathematical equations . . . dates like April 15 . . . or mountains of tax forms . . . get in your hair, doctor, make use of the series of helpful articles on taxes appearing in the Journal of the A.M.A. during January and February. Prepared by the Law Department staff, these articles especially pinpoint the changes in the internal revenue code as adopted by the Eighty-third Congress. These articles later will be incorporated in a handbook on taxes which will be available from the Law Department.

Against staphylococci

This is an actual strain of *staphylococcus aureus,* isolated from a 5-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists penicillin and three broad-spectrum antibiotics. This organism may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . abscess . . . bronchopneumonia . . . empyema . . . carbuncle . . . pyoderma . . . bronchiectasis . . . furunculosis . . . pharyngitis . . . septicemia . . .* and *tracheobronchitis.*

for specific therapy against coccic infections...

Wide-range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab*. As you know, most bacterial respiratory infections are produced by staph-, strep- or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

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prescribe

filmtab®

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

Against common intestinal flora

This sensitivity test shows **ERYTHROCIN**, penicillin and three broad-spectrum antibiotics against a typical strain of *E. coli*. Note that **ERYTHROCIN** and penicillin do not affect growth of the organism—*while all three broad-spectrum antibiotics show marked inhibitory action.* Since **ERYTHROCIN** is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin therapy. Abbott

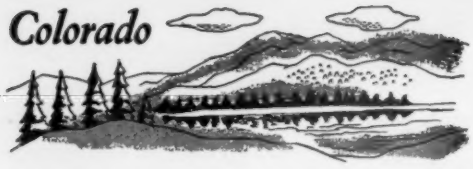
002087

prescribe

filmtab®

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)



Indoctrination For New Members

The first "indoctrination course" for new members of The Colorado State Medical Society will be held February 15, just prior to the opening of the Society's annual Midwinter Clinics Session. Organization of such a course, planned to be held at least semi-annually hereafter, was ordered by the House of Delegates last September. Under the House of Delegates order, attendance by new members hereafter will be mandatory, and other members of the Society may attend voluntarily. A new member may be excused from the first course for urgent reasons, but will then be required to attend the next one. Notices have been sent to sixty-three new members elected since last September.

The February 15 course will open at 9:00 a.m. at the Shirley-Savoy Hotel with a welcome to the new members by Dr. Samuel P. Newman, President of the State Society. The remainder of the morning will be devoted to three lectures: "Structure and Functions of Organized Medicine" by Dr. McKinnie L. Phelps of Denver, "Modern Medical Public Relations" by Mr. Harvey T. Sethman, Executive Secretary of the Society, and "Health Insurance—Its Position in Medicine Today" by Dr. Fredrick H. Good of Denver. Question and answer periods will follow each lecture.

The afternoon session will include four lectures: "The Meaning of Medical Ethics" by Dr. Leo W. Bortree of Colorado Springs, "Seven Years' Experience With the Board of Supervisors" by Drs. Duane Hartshorn of Fort Collins and D. W. McCarty of Longmont, "Causes and Prevention of Malpractice Suits" by a representative of the Society's Medicolegal Committee, and "A Summary of Current Medical Society Policies" by Dr. Newman.

The course was arranged under the direction of the Society's Board of Trustees by a committee composed of Drs. J. Lawrence Campbell, Chairman; F. H. Good, and Gunnar Jelstrup, all of Denver.

Component Societies

BOULDER COUNTY

The Boulder County Medical Society held its regular meeting at the Boulder Country Club, January 13. Dr. Robert T. Porter of Greeley, President-elect of the Colorado State Medical Society, was the guest speaker and discussed State Society problems in regard to labor unions, the Medical Practice Act, a proposed new State Medical Society Building, and the 1955 budget. Other guests included Dr. Lawrence Buchanan, State Trustee from Wray, Harvey T. Sethman and John W. Pompelli of the Colorado State Medical Society Executive Office.

The Boulder County Medical Society will hold its next meeting at Longmont.

SPOKESMEN LIST CORRECTIONS

The following are corrections to the Medical Spokesmen's List which appeared in the January issue of the Journal.

"DENVER . . ." Adams — President, C. W. Anderson, 224 Republic Bldg., Denver 2. Publicity Chairman, William M. Covode, 1820 Gilpin, Denver, 18.

Fremont County does not have a Publicity Chairman.

Morgan County—The address of W. Ham Jackson, Secretary, is 9th and Main.

Obituaries

HAROLD L. HICKEY

On December 31, 1954, Dr. Harold Hickey died quite suddenly following surgery. He was born in Denver, November 15, 1892, and educated in this city, receiving his B.A. degree from the University of Denver in 1913. He then attended medical college at Northwestern University and did graduate work at Harvard University.

Dr. Hickey has practiced in Denver since 1920 as an ear, nose, and throat specialist. He served as a member of the faculty of the Colorado School of Medicine for twenty-seven years and was professor of otolarngology for seven years. He was a member of the American Medical Association, of the Colorado State Medical Society, and of the Denver Medical Society.

Surviving Dr. Hickey are his widow, Allena, of 640 Vine Street; two daughters, a sister, and five grandchildren.

MYRON L. BABCOCK

Dr. Myron L. Babcock died at Mercy Hospital on December 28, 1954. He was born in 1872 at Clifton, Illinois, where he received his preliminary education and graduated from the Keokuk, Iowa, School of Medicine in 1901.

Dr. Babcock practiced in Julesburg, Colorado, for a time before going to Bellevue Hospital in New York and then to London and Vienna to specialize in eye, ear, nose and throat diseases. He then returned to Colorado to establish his practice in his specialty at Sterling. He was a member of the American and Colorado Medical Societies and a Past President of the Northeast Colorado Medical Society at Sterling.

Surviving Dr. Babcock are his widow of 260

When you select an antibacterial —

...you may wonder which one to prescribe. We believe you'll agree that most of them are rather good. Still, we suggest you try Gantrisin 'Roche'...because this single sulfonamide is soluble in both acid and alkaline urine...because it has a wide antibacterial spectrum...an impressive clinical background...and, above all, because it's so well tolerated by most patients. Gantrisin®-- brand of sulfisoxazole.

These are
the Gantrisin
advantages —

Gantrisin 'Roche' is a single, soluble, wide-spectrum sulfonamide -- especially soluble at the pH of the kidneys. That's why it is so well tolerated...little danger of renal blocking...does not require alkalies. Produces high plasma as well as high urine levels. Over 250 references to Gantrisin® in recent literature.

Dahlia Street; a son, Dr. M. F. Babcock; a daughter, two brothers, and three sisters.

RUSSELL T. RAMSEY

Dr. Ramsey died December 11, 1954, after a short illness. He was 92 years old. Born December 3, 1862, in Kentucky, he was graduated from the University of Kentucky in 1884, and from the University of Cincinnati Medical School in 1887.

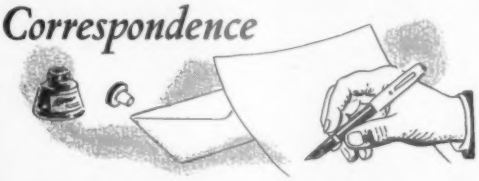
Dr. Ramsey took postgraduate courses in New York and in Philadelphia. He came to Denver in 1901 and practiced here until his retirement in 1947. Dr. Ramsey was a staff member of several Denver hospitals, of the Colorado State Medical Society and of the American Medical Society.

Surviving are his wife, Elizabeth; two daughters, a son, seven grandchildren, and sixteen great-grandchildren.

CLINTON HARRIS, M.D.

Word has been received of the death on December 15, 1954, in Grinnell, Iowa, of Dr. Clinton Harris, formerly of Colorado Springs. Born December 2, 1875, in Grinnell, Dr. Harris was in his eightieth year. Following his graduation from Grinnell College in 1896, he attended Rush Medical College, receiving his M.D. degree in 1902. He practiced in Iowa before coming to Colorado Springs in 1918 in the position of Chief of Staff to the Modern Woodman Sanatorium, a position which he held until 1936. After a short period in private practice in Colorado Springs, he returned to Grinnell where he was active for some years as public health officer. Dr. Harris was very active in Colorado and in the El Paso County Medical Society from 1918 to 1937.

Correspondence



EDITOR'S NOTE: *The following letter, addressed to the Chairman of this Journal's Editorial Board, enclosed a "want-ad" which has been duly inserted in that section of this issue. We thought the letter itself worthy of publication.*

December 21, 1954.

Dear Doctor Mason:

I believe that the integrity of a magazine is reflected in the sincerity of its advertisers and that you require knowing something about me.

I graduated from Tufts College Medical School, cum laude; Harvard postgraduate; completed internships in Grace Emergency Hospital, Boston (now non-existent), 18 months; New York Lying-in Hospital, six months; New York Polyclinic Postgraduate Medical School and Hospital, two years, after which I volunteered in the French Army Medical Service in France two years before we entered the war, at which time I joined the U. S. Naval Medical Corps, serving at the Brooklyn Naval Hospital and on the U.S.N. Hos-

pital Ship Comfort. I then engaged in private practice in New York City, was on staff of several hospitals, taught at Bellevue Medical School and was a member of the Membership Committee of the New York County Medical Society. Sensing great opportunities I came to Argentina with my wife and two boys, studied and passed every examination, orally in Spanish and in public with the students, of the entire seven-year medical course and became the first and still the only American-trained, American physician to revalidate his diploma to practice medicine in Argentina.

That was 16 years ago but now, with one son in his junior year at Cornell University and the other boy with our grandchild also in America, my wife and I have decided to come home . . . permanently. Last August we completed a three months' air-trip across and about the United States and Hawaii, with the American Medical Convention in San Francisco as the lure. Our conclusion after more than 54,000 miles of travel on this trip was that the Rocky Mountain States had more to offer in the pure joy of living and working than any other area we have ever known. And the happy fortune of receiving just this afternoon four of the last issues of "Colorado Wonderland" clinched the deal . . . for we are now convinced that your State of Colorado has more charm, more natural beauty, more diversified and closer recreational outlets than any State. For that reason we prefer Colorado and, although I am licensed to practice in New York and Massachusetts and many other states have reciprocity agreements with them, I do feel that it "vale la pena" (worth the effort . . . literally "punishment," "pain," "hardship") to take your State Board of Registration exams to live in Colorado!

That is the story behind the ad. I am looking eagerly forward to 10 to 15 years more of practice . . . and if you have any suggestions to offer me in my desire to be in Colorado, Dr. Mason, I would appreciate your interest and cooperation and be deeply grateful.

DR. WILLIAM B. GILES,
Safico Building, Corrientes 456,
Buenos Aires, Argentina.

P.S. I am enclosing a cheque for $10.00 which I believe will be sufficient for one insertion. If it is more, please advise me. If less, apply the balance to a subscription to your Journal which I hope will be paid for, for the next 25 years!

P.P.S. To facilitate prompter liaison with any enquiry, my good friend, Dr. William Charles Poole, 4690 Tompkins Avenue, Oakland 19, California, will forward mail and keep me informed. If you require approval of a proof please send it to him. I would like the ad ready for your January 15 deadline. W.B.G.

Wyoming

Obituary

GEORGE BAKER, M.D.

Dr. George Baker, prominent Casper internist, succumbed to coronary thrombosis on Saturday, December 18.

A native of Nebraska, born in O'Neill on February 20, 1905, he moved to Cheyenne in 1907 and attended grade and high schools in Cheyenne. After moving to Casper in 1923 with his parents he attended the University of Wyoming, Washington University of St. Louis, Missouri, and graduated in medicine from the University of Nebraska Medical College. Following postgraduate training in St. Louis, Missouri, and Brooklyn, New York, he began his practice in Casper in 1932. He had practiced in Casper since that date. During that time he served as Chief of Staff of the Natrona County Memorial Hospital, President of the Natrona County Medical Society, and President of the Wyoming State Medical Society. Dr. Baker also served as Natrona County Health Officer from 1939 until 1943.

His accomplishments in the scientific field of medicine are well known and are typified by a classic paper on Rocky Mountain Spotted Fever which appeared in the "Medical Clinics of North America," Volume 35 for 1951, page 907. He was a member of the American Board of Internal Medicine and a Fellow of the American College of Physicians.

Dr. Baker is survived by his wife, the former Mary Louise Reed, and four daughters and two sons, his mother and a brother, all of Casper.

Dr. Baker's careful and conscientious work in the practice of medicine will be missed by the people of Wyoming.

A.M.A. ISSUES NEW CATALOG OF HEALTH BOOKLETS

For a healthier 1955, the A.M.A.'s Bureau of Health Education presents its new catalog of "Publications About Your Health." Listing hundreds of new pamphlets on personal and family health problems, copies of these booklets may be secured for distribution to your patients through A.M.A.'s Order Department.

Several intriguing new titles include—For Safer Cycling which describes a community program for teaching children safe bicycling rules; Is He Ready for Kindergarten? outlines the points parents should watch for in the physical, mental and emotional development of their pre-school children; The New Contact and Corneal Lenses discusses the new type lenses and the types of people who can safely wear them; Joe's Nervous Breakdown explains why and how breakdowns occur and what to do about them.

Write today to the Bureau for a copy of the new catalog.

pedigree

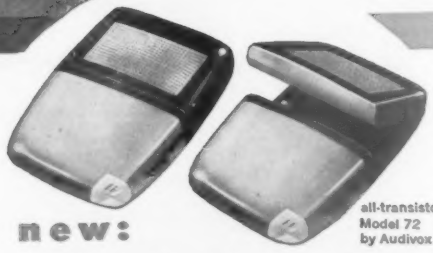
Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.

Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor Model 72 by Audivox

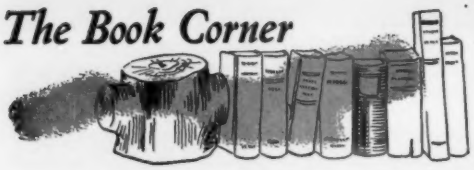
new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the pedigreed hearing aid.

The Book Corner



New Books Received

New books received are acknowledged in this section. From these, selections will be made for reviews in the interests of the readers. Books here listed will be available for lending from the Denver Medical Library soon after publication.

The Kidney, A Ciba Foundation Symposium, arranged jointly with the Renal Association. Editor for the Renal Association, A. G. Lewis, M.D., B.S., B.Se., M.R.C.P. Editor for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., assisted by Joan Etherington, with 125 illustrations. Published by Little, Brown and Company, Boston. Price: $6.75.

Conserving the Health of Colorado's Children, a Handbook for teachers, State of Colorado, Department of Education and Division of Public Health, 1944.

M. Barschneider Kleines Diagnostikon, Differential-Diagnose Klinischer Symptome, Ferninand Hirt in Kiel.

Reproductive System: By Frank H. Netter, M.D. Volume II, the Ciba Collection of Medical Illustrations, Commissioned and Published by Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

Handbook of Treatment: By Harold Thomas Nyman, M.D., Author of Integrated Practice of Medicine, Handbook of Differential Diagnosis. The Handbook of Treatment is an accurate, reliable and concise reference book in which are gathered precise data on today's methods of treatment for almost every human ill. Published by J. B. Lippincott Company, Philadelphia. Price: $8.00.

Public Relations in Medical Practice: By James E. Bryan. The Medical Profession, traditionally opposed to ballyhoo and the other self-advertising connotations sometimes assigned to "public relations," is becoming aware of medicine's need for attention to the public relations field. Published by Williams and Wilkins Co.

Cardiac Anomalies: By Moragues and Lynxwiler, M.D.'s. To give the individual heart patient the best that surgery can offer, accurate diagnosis is essential. This necessitates complete clinico-pathologic correlation of all the facts. Published by Williams & Wilkins Company. Price: $6.50.

Antibiotics and Antibiotic Therapy: By Allen E. Hussar, M.D., and Howard L. Holley, M.D. This is the first clinical manual on the properties, potentialities, and limitations of all the antibiotics in clinical practice. A well-organized and comprehensive primer on the subject, sorely needed by the medical student, and practitioner, to guide him through the maze of antibiotics to prevent their incorrect and indiscriminate use. Published by The MacMillan Company, November, 1954. Price: $6.00.

Textbood of Biochemistry, Second Editon: By Edward S. West, Ph.D., and Wilbert R. Todd, Ph.D. Published by MacMillan Company, New York, 1955. Price: $12.00.

Book Reviews

Diseases of the Skin: New (4th) Edition: By George Clinton Andrews, M.D., F.A.C.P., Clinical Professor of Dermatology, College of Physicians and Surgeons, Columbia University; Attending Dermatologist of the Presbyterian Hospital, Columbia-Presbyterian Medical Center, New York. 877 pages, 777 illustrations. Copyright, 1954, by W. B. Saunders Company, Philadelphia. Price: $13.00.

This is the fourth edition and first revision in eight years of this standard text. The material previously covered has been thoroughly revised and brought up to date. Most of the recent advances in dermatology are included. Although the author has endeavored to scrutinize every sentence carefully, some obsolete therapy has not been omitted and newer therapeutic agents included.

Naphuride, a highly toxic drug, is particularly recommended for early cases of pemphigus; although steroid medication is more beneficial and less dangerous to the patient. Fractional roentgen therapy is suggested for geographic tongue. This recurrent, benign condition responds better to antibiotic troches of which there is no mention. In the acute stage of acrodermatitis chronica atrophicans, penicillin injections may arrest the progress of the disease. This treatment is not discussed by Andrews.

Trichomycosis axillaris, despite its name, is usually produced by a diphtheroid organism, and the etiologic agent is not a minute fungus, as stated by the author.

Andrews maintains that, when spontaneous involution of a cavernous angioma occurs, it is usually incomplete and accompanied by more scar formation than would result from proper therapy. The reviewer has seen numerous untreated cavernous angioma disappear spontaneously with minimum scar formation.

The author is to be commended for describing proprietary remedies by their trade as well as chemical names, so the reader can prescribe them more easily. All prescriptions are written in English. The quantities called for in the ingredients of some prescriptions are carried out to more decimal places then is required, and makes unnecessary work for the compounding apothecary.

Despite these minor criticisms, this book reflects the amazing progress of dermatological knowledge in the last eight years. The volume is highly recommended to both general practitioners and specialists. It is a worthy successor to its distinguished predecessors.

EGBERT J. HENSCHEL, M.D.

The Auxiliary Heart: By William Walter Wasson, M.D., Consulting Radiologist, St. Anthony Hospital, Children's Hospital, St. Luke's Hospital, National Jewish Hospital, Denver, Colorado. This book is the result of thirty years of intensive study of the chest and the daily attempt to evaluate the lesser circulation as portrayed by the roentgen film. Published by Charles C. Thomas, Springfield, Illinois.

The intriguing subject of this monograph is, in reality, a discussion limited to the right ventricle and its auxiliary aids inherent in the structure and function of the lesser circulation; i.e., the author makes a case for the propulsive power of these chest structures possibly equal to the propulsive power of the right ventricle itself. To establish this thesis he presents in logical sequence the histology, physiology and physiodynamics of the respirato - circulatory mechanism.

Under the caption of physiodynamics as it concerns the lesser circulation, such factors as the supporting air column, the to and fro respiratory pumping cycle, the elasticity of the arterial and capillary walls, and the relative difference in thickness of the right and left ventricular walls at birth and at maturity.

He also indicates how various types of diseases modify these physiodynamics and classifies them as follows:

(1) Diseases of the heart;

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(2) Diseases of the pulmonary arteries, capillaries and veins;
(3) Diseases of the lungs involving the lesser circulation; and
(4) Diseases of the thorax and the general health of the patient.

The evaluation of Roentgen films as it concerns the lesser circulation would seem to be of primary concern to radiologists but the discussion of the diaphragmatic syndrome cannot fail to have an interest and value to any practicing physician.

The material of this book is clearly and interestingly presented. It is richly illustrated and the author's beliefs are well substantiated by an extensive bibliography.

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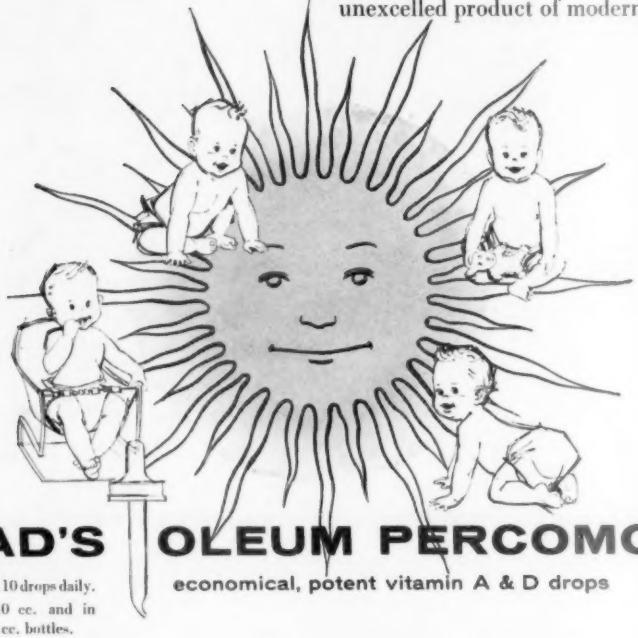

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